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The MODEL RAILWAY NEWS

VOL. 29 No. 342 JUNE 1953

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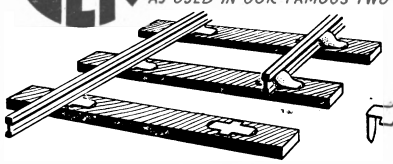

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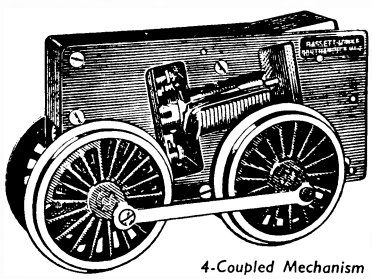

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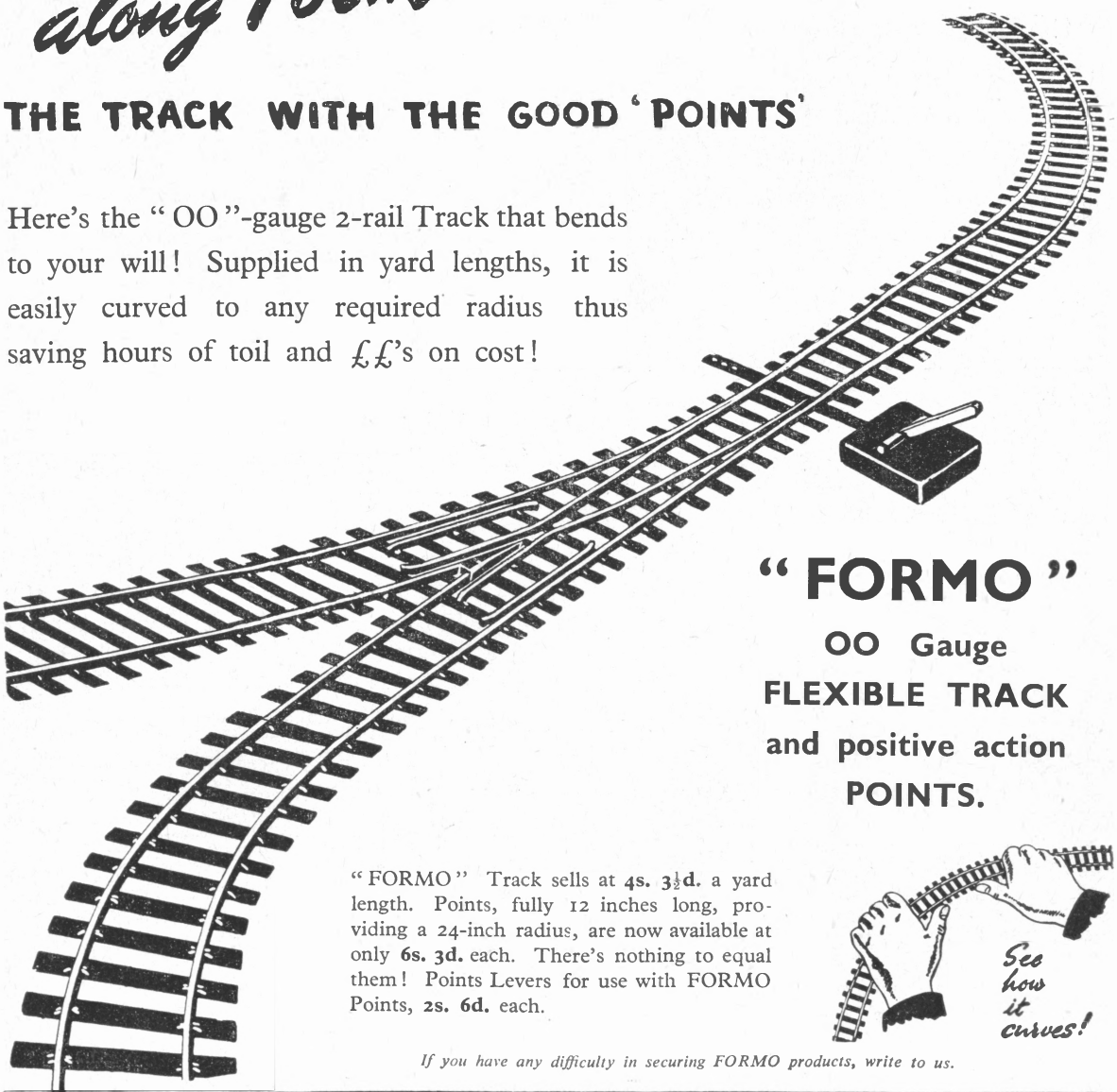

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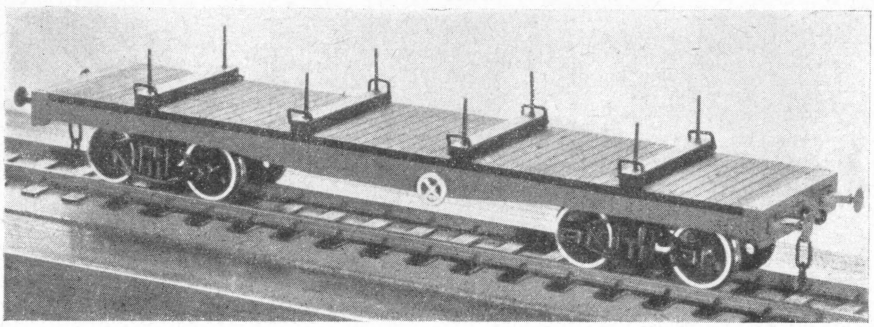

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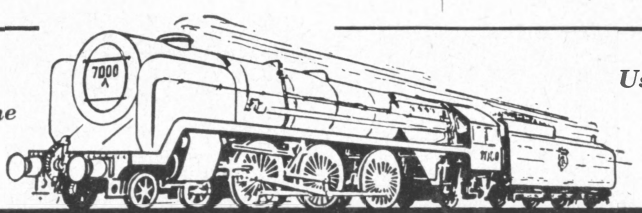

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No. 342

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COVER PICTURE

" Britannia " seems a fitting theme for this Coronation month, so our cover shows one of the Western Region locomotives, No. 70018 " Flying Dutchman " leaving Box Tunnel in the summer of 1951. This engine is one of the batch named after G.W.R. broad gauge engines and she is the first " Britannia " to grace our cover. The photograph is by British Railways.

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The Annual Subscription is 13s. 6d., post free to all parts of the world.

The Editor invites correspondence and original contributions on all aspects of model railways in the smaller scales and on suitable prototype subjects which should be addressed to him at 19-20, Noel Street, London, W.1. Telephone: GERrard 8811.

The MODEL RAILWAY NEWS

19-20 NOEL STREET, LONDON, W.1.

IN a previous editorial article dealing with free-lance modelling, reference was made to the fundamental principles of locomotive design, and this caused several readers to ask for some enlightenment as to the meaning of this phrase. There seems to be a widespread impression that, if all locomotives were built to the same principles, there would be no progress in design. This idea, of course, is far from correct.

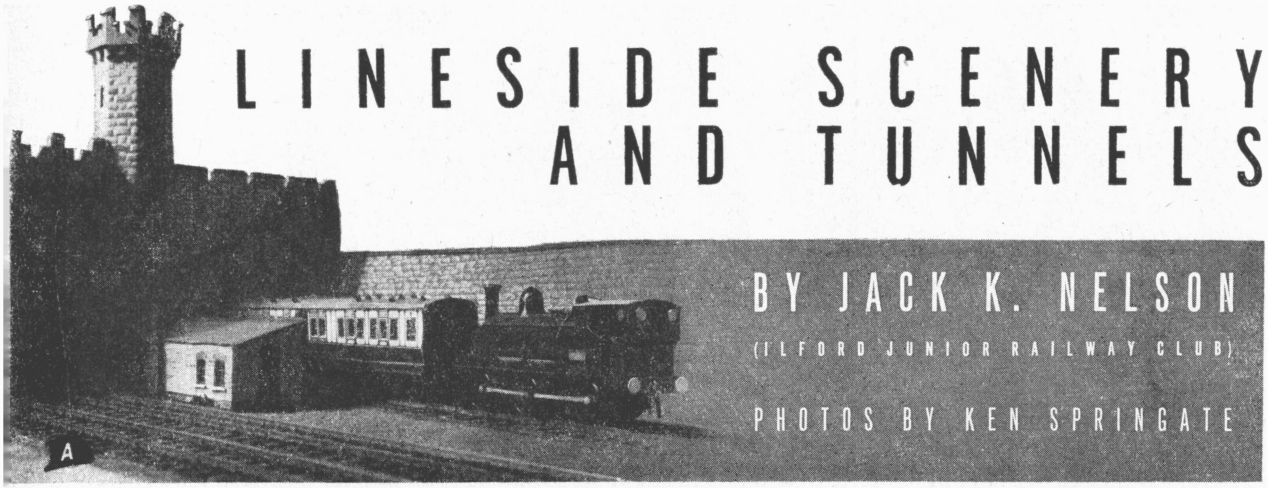
There are several principles that govern any locomotive design. First, there are definite ratios and propertions that must be observed in settling the details of boiler and cylinder dimensions, lengths of connecting-rods and so on, whatever the size of the engine ; this calls for a high degree of technical knowledge and skill, because, below certain limits, the locomotive could never work, and above those limits the locomotive would probably be more than wasteful in its consumption of fuel and water. Good proportions are therefore essential to a successful locomotive, for purely technical reasons apart from the question of mere appearance.

Then, strange as it may seem—and this appears to be a matter that is never given a thought by " free-lance " builders—a knowledge of the proportions of human anatomy and the limits of human endurance should have a strong influence in the matter. This governs the design of so simple a component as a locomotive cab, among other things. If some of the free-lance cabs we have seen were enlarged to full size, they would be condemned out of hand by locomotive designers and enginemen. A mere detail like the cutaway in a cab-side is always designed with an eye on the comfort and convenience of the men who will have to use it.

The question of the stability of the locomotive as a vehicle, not to mention its mechanical strength as a structure, must be most carefully considered, involving something more than ensuring that it will stand upright and on all wheels, standing or moving, on a straight road or on a curve. Here again, there is usually plenty of evidence that the builder of a free-lance model has not given the slightest thought to this important matter. True, in a model, it is almost insignificant, but in full size it is a matter of paramount importance.

The subject of fundamentals is far too extensive to be discussed in detail here, but those aspects we have mentioned should be enough to show that free-lancing is not merely a matter of assembling a number of components into something which vaguely resembles a locomotive ; it is a matter involving pure design, from first principles upwards.

LINESIDE SCENERY AND TUNNELS



BY JACK K. NELSON
(ILFORD JUNIOR RAILWAY CLUB)
PHOTOS BY KEN SPRINGATE

RAILWAY historians record the story of a planning committee in the Southern Counties which objected to the engineer's proposal because the chosen route for a new railway was very easily graded and avoided the necessity for a tunnel. Such an easy line they rejected and appointed another engineer who was able to plan an alternative route which had severe gradients and the desired tunnel !

Although we laugh at this, many railway modellers demand a tunnel. If properly built, in a reasonable position, a tunnel can be not only attractive, but

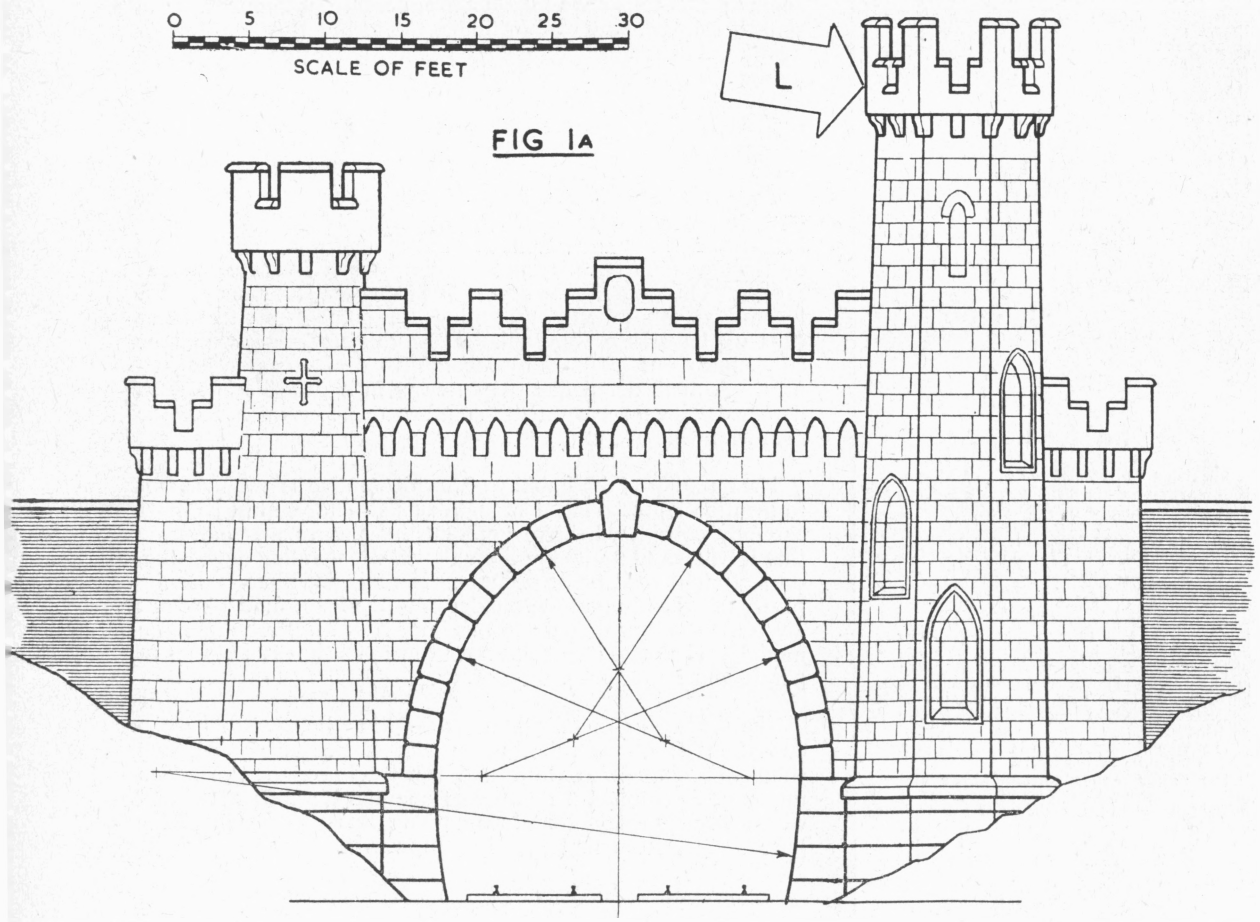
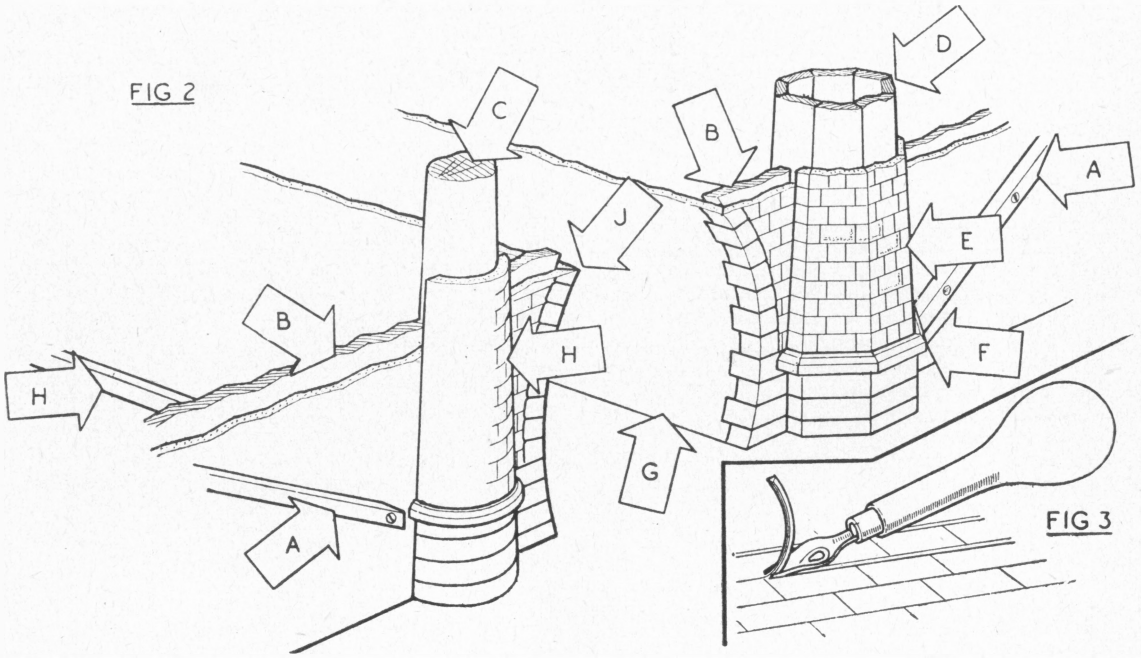
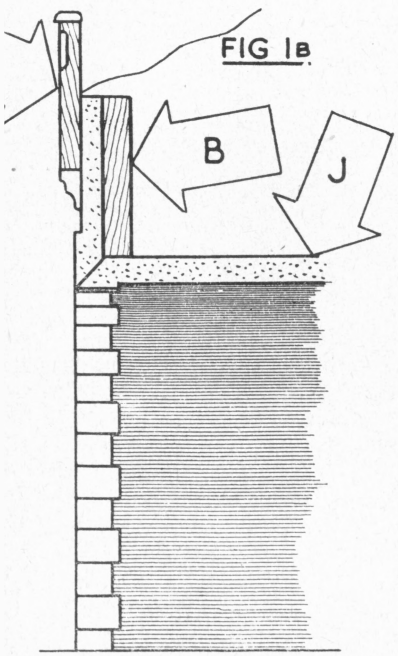


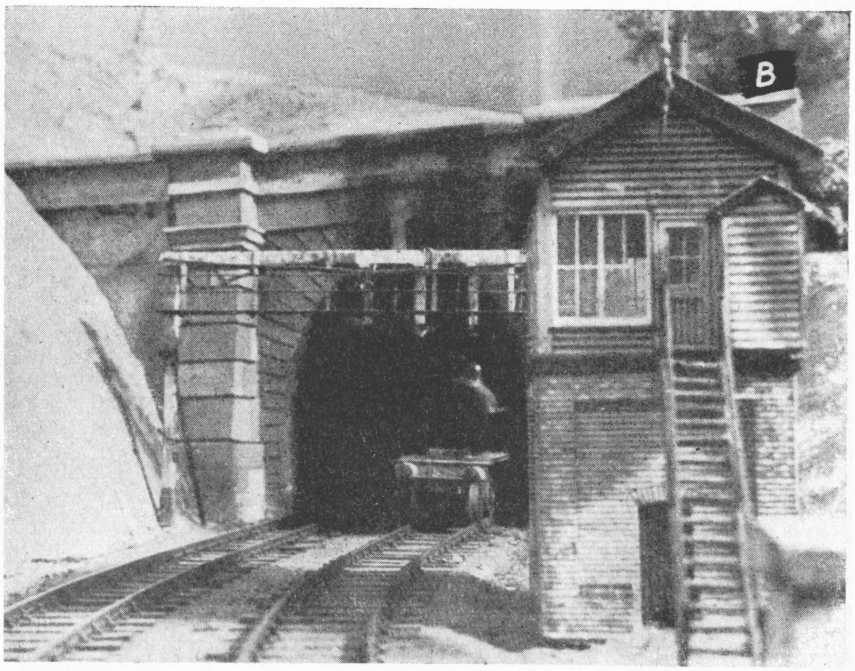
FIG 1A



useful. For those interested in timetable operation it can be used to conceal storage tracks allowing realistic working to take place on the open track.

It is important that the tunnel should look as though it could not have been avoided. If it penetrates only a small hill, which could have been missed by a slight deviation, it cannot look realistic. Photograph A shows very simple earth works at a tunnel portal on my " HO " line. The banks are built up of rough card on wood supports. The card is covered with surgical lint glued on fluffy side up. It is given a coat of thin size and painted with oil or poster colour to represent grass. Before it is dry the lint is roughened with a wire brush. When modelling grass covered banks be careful about the colour. If you have sufficient courage,





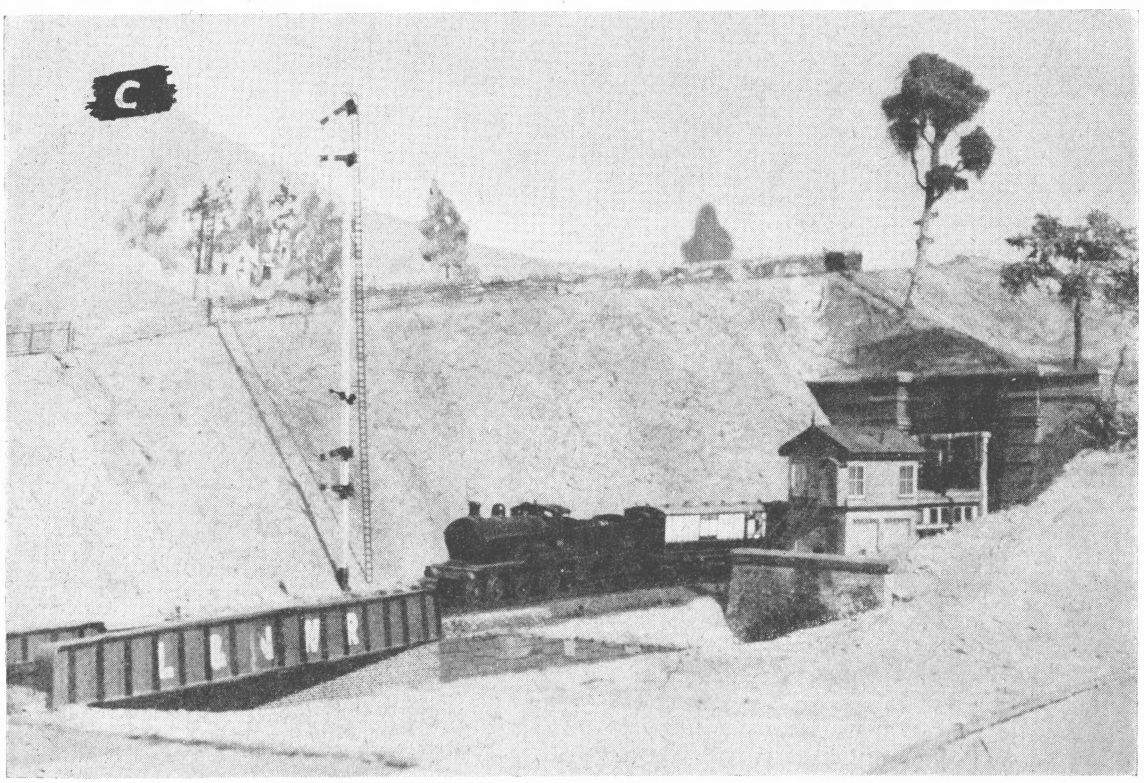
take a box of water colours to a lonely stretch of line free from " spotters " and try to reproduce the colours of the embankment. This is worth doing as you will never again use the blue-green commercially described as " grass colour." Crushed earth from the garden may be added to the surface in patches before the size dries.

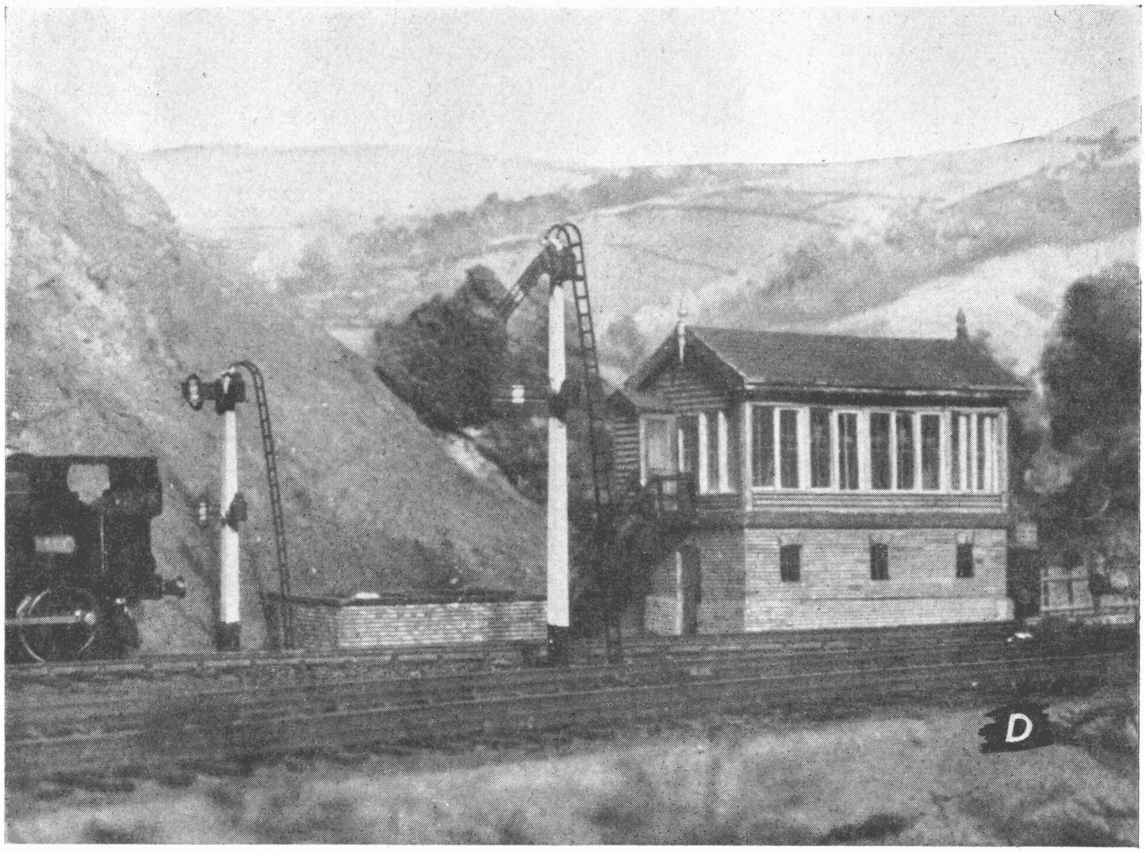
Photograph B shows the scenic effect of modelling around another tunnel mouth. This was built to official drawings of Linslade Tunnel, south end, but, after completing the model and inspecting the actual tunnel it was found then to be entirely different ! In case signalling experts are worried about the gantry shown in this photograph it should be pointed out that the facing junction which it will protect has yet to be added. The cutting side here is much too steep but limitation of space prevented the use of a flatter angle. Normally the model cannot be viewed from this position, but Ken's camera can be placed where the eye cannot. The spectator sees things as Photograph C where the steep banks do not look quite as bad. A rock cutting would, of course, be better but, as I use coal suitably painted for rock, it could not be used here as a hidden track immediately behind the grass gave insufficient clearance for lumps of coal. Photograph E shows some rock outcrops built this way. They can be seen on the bank behind the train which is ascending the incline from the branch.

In confined spaces, difficulty is sometimes found in bringing down the height of the hills without their appearing unnatural. Photograph D shows an effective way of doing this. The steep bank on the extreme left is modelled with surgical lint as already described. The range of modelled hills is continued painted on the backscene which can be seen behind the signal box. A small gap between the modelled bank and painted scene helps the general effect. Modelled trees which can be seen both sides of the cabin, help to make the background effectively distant.

Fig. 1 is a scale drawing of a tunnel mouth. Except for the omission of the adjacent single line bore, it is similar to that shown in Photograph A and is for a representative model only. Complete drawings for an accurate model would fill many pages but Figs. 1 and 2 will give enough information for most modellers. Stonework in small scale models can very well be made from good quality plain lino such as is used for the production of lino printing blocks.

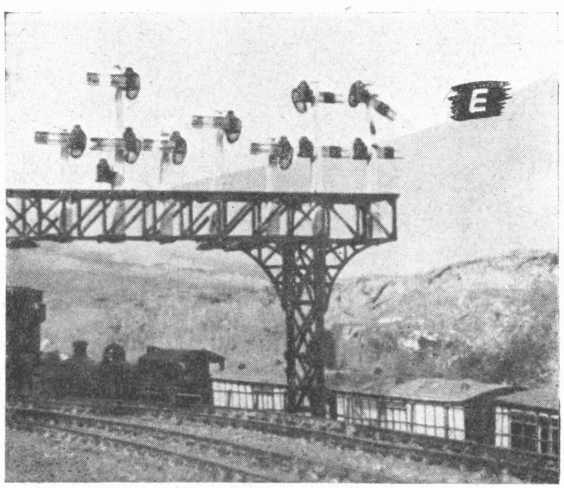
The tunnel mouth is made from a wood frame, *B*, Figs. 1 and 2, upon which the lino is mounted. Bostik is a satisfactory adhesive for this purpose. The round tower is best formed from a tapered piece of wood, *C*, Fig. 2, covered with lino, *H*. The octagonal tower must be built up from wood strips, *D*, glued together and covered with lino panels, *E*. These should have accurately bevelled edges made with a sharp knife. The lino covering the tunnel mouth should be bevelled as shown at *J* so that the similarly bevelled tunnel lining, *G*, will





make a clean joint. If this lining does not continue through the tunnel, it must be long enough to look as though it does. In order to keep the bottom edge straight, stripwood, *H*, is added. *F* is best made from wood attached direct to *D* before the lino is secured above and below it. *A-A* are wood strips for supporting the cutting sides after the tunnel is erected. *K*, Fig. 1, can also be made from lino, but a neater job is produced by using wood cut out with a fret saw. The upper part of the tower, *L*, should also be made this way.

When everything is erected, carving the lino can be started. Use a lino cutting tool. These tools can be obtained with a good selection of cutters from most art shops. A rough sketch of one is shown in Fig. 3. This has a " V " tool fitted for marking the joints between the stones. The grooves should be cut along pencilled guide lines as shown. The Xacto range also now includes suitable cutters for this purpose. After the lines have been carved, a few stones can be cut back a bit deeper so that the surface is uneven. Photograph A shows the stones of the tower produced this way. Although I strongly favour water colours for painting small models, they cannot be used on lino, and oil colours must be used. It is worth while adding small quantities of dry powder colour to the paint in order to obtain the right texture. Be careful that the

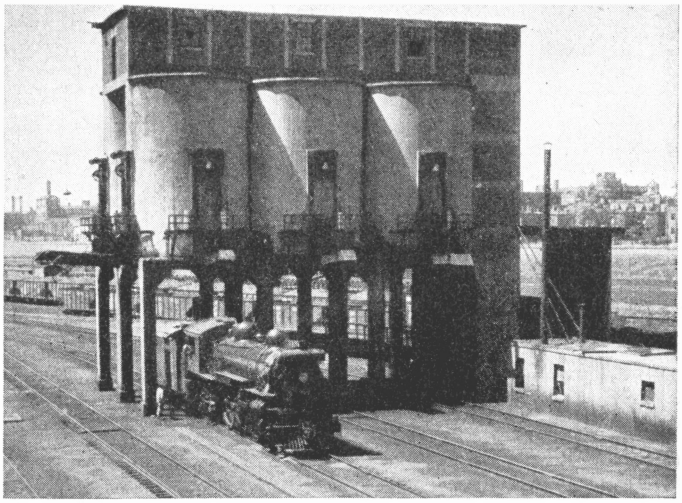


colours are not too uniform. Pick out some stones with different shades and show the effect of smoke over the tracks.

When painting the tunnel lining, which in the prototype is usually brick, add more black progressively to the colour as the painting advances away from the front until it is realistically dark.

DESIGN FOR A COALING STAGE

by J. H. Ahern, F.R.P.S.



THE coaling stage shown in the photographs is near the Union Terminal in Toronto, Canada. With slight modifications it should make an excellent prototype for a model, and there is no reason why a similar one should not be installed on an English layout. It may claim the attraction of novelty for I cannot remember having seen a model of this type. It is intended for bogie hopper wagons, a number of which are visible in the pictures. These are attractive vehicles for a model railway, but there does not appear to be any reason why the stage should not be adapted for ordinary wagons by the addition of a wagon tipple gear, either working or dummy. In fact, the tipple might be simply imagined if the wagon shed was extended somewhat at both ends, so that the interior was more or less concealed. This possible modification is not shown on the drawings. The original has a raised wagon track, but this could be dispensed with, it being assumed that the coal chute and conveyor were sunk partly below ground level. I have made drawings for a simplified stage, scaled for "OO"-gauge. Fig. 1 gives front and side elevations and Fig. 2 is a plan to half the scale of the other two drawings. There is nothing hard and fast about the dimensions; I had to estimate them as best I could by eye, for the purpose of preparing the drawings. The constructor may elaborate the design if he wishes, with the assistance of the photographs. I have omitted the rather complicated coal delivery operating gear as a simpler form is, I believe, possible. This is shown in Fig. 4. The

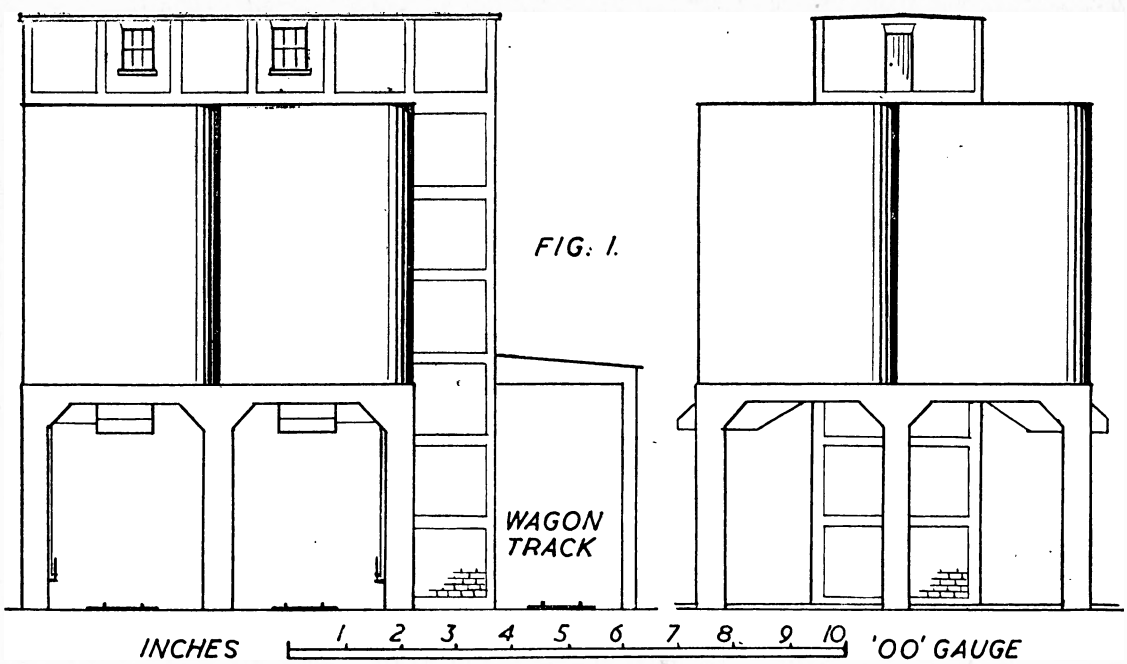
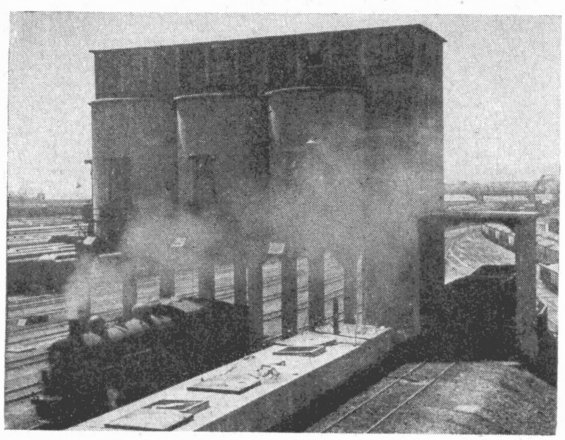
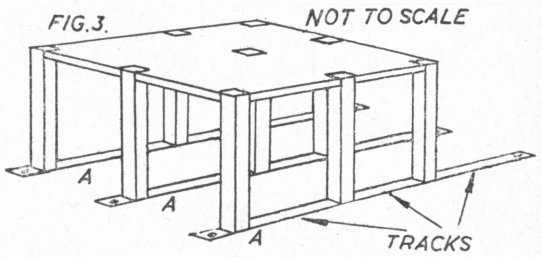


FIG. 1.

delivery of coal to locomotives is controlled by a lever located at the base of one of the concrete columns which support the structure. Of course, the constructor can model the arrangement seen in the photographs if he feels equal to the task.

Construction is quite straightforward. The cylinders might be sections of postal tube, or solid blocks of wood if something suitable can be found. They should be finished to represent concrete, as should the stage and supporting pillars. The hoist shaft, and the building on top of the cylinders, may be solid wood or built up in cardboard; they are finished as brick, and the lines of lighter tone are concrete. If the hoist shaft is solid it will help to give strength to the model. The flat tops of the cylinders should be painted dark grey, and the roof of the structure above them may be slate or corrugated iron. The combination of colours should make the model very attractive. The platform, or stage, on which the cylinders stand, may be a piece of ply-wood $\frac{3}{16}$ in. or $\frac{1}{4}$ in. thick, carefully sandpapered on all edges. Recesses are cut in it a good close fit for the pillars (nine of them) of $\frac{1}{2}$ in. square strip-wood, on which the structure stands. The pillars should be glued and pinned in place, a small set-quare being used all the time to keep them perfectly vertical. And be sure they are all the same length, for it is not easy to correct matters afterwards. The method of mounting the cylinders must depend on whether they are solid or hollow. In the latter case pieces of strip-wood, say 1 in. square, may be cut to length exactly equal to the internal diameter of the tubes, and rounded slightly at the ends to make a nice push fit. These should be screwed to the stage in positions previously marked out for the cylinders, which are pushed over them and secured with glue and pins. Note that the blocks should be fixed diagonally in relation to the edges of the platform, so that all the ends may be accessible for pinning. The same method may be used for the attachment of the flat roof. For additional strength the cylinders should be joined to one another at the points of contact, before the roof is put on. This can be done by piercing holes near the tops and inserting staples of stiff wire, the ends of which are bent flat, after the style of the wire binders used in making up a magazine.





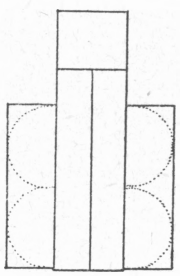
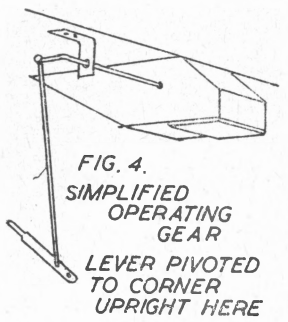


FIG.2.
PLAN



The erection of such a model on the railway is always something of a problem; a section of the baseboard may be cut out and the model built up on it, but there may be practical difficulties in doing this, and it is a clumsy proceeding anyway. I suggest the method shown in Fig. 3, where *AAA* are strips of the same thickness as the sleepers in use. They are drilled and countersunk for small screws, which pass up from below into the pillars. If necessary the heads are filed flush after fixing. The strips are extended to support the wall which forms the back of the wagon shed, and also to provide brackets, front and rear, for screws to attach the model to the baseboard of the railway. For the wagon shed a piece of strip-wood may be screwed to them and worked up to represent a low platform for the use of the operating staff, and the shed wall attached to it. The locomotive and wagon tracks are laid over the strips, and additional sleepers inserted for appearance if desired. Thus, there is no difference of rail level to contend with.

The wagon shed can be brick, concrete, corrugated iron, or even timber, painted black. The last named should contrast rather nicely with the light tones of the cylinders and stage. Subsidiary buildings, such as a foreman's office and a store, should not be forgotten, and may be placed in any convenient position; there is room for them between the locomotive and wagon tracks. Don't omit to provide the former with an iron stove pipe. It is surprising what a difference such apparently insignificant details make to the finished effect.

NOTES OF THE MONTH

Exhibition at Tonbridge

The second exhibition to be organised by the Tonbridge and District Model Railway Club was opened on Wednesday, April 29th, and remained open until the following Saturday evening. We noted that, while the number of exhibits may have been somewhat less than that of last year, the quality was better.

The models in the competition section included locomotives, rolling stock, track work, lineside effects and scenic effects, all to 4-mm. scale. We were interested to note that there is, apparently, a lady member of the club, Miss E. R. Walter, of Crowborough, who had entered a 4-mm. scale G.W.R. pannier tank and a well-made piece of trackwork (including a double slip) which, we understand, is part of a projected layout.

Top marks in the Locomotive section went to Mr. A. C. Gale for his 4-mm. scale L.S.W.R. Adams 0-4-2 engine. Other winners were : Mr. A. Capjon for his train of eight G.W.R. " Toplight " corridor coaches, nicely finished inside as well as outside ; Mr. W. S. Tomlinson for his working model terminal station in which the trackwork, buildings and lineside features were especially neat and pleasing ; Mr. F. S. Bond for a fine model of a through Warren girder bridge, and Mr. S. L. Smith for a most effective painted background and topographical features for the club's layout.

Neighbouring clubs, from Crowborough, Tunbridge Wells, East Grinstead, Medway and Aylesford contributed a remarkable variety of models. Incidentally, the Aylesford club won first prize for the best club stand. All concerned are to be congratulated upon a very pleasing show.

No Capuchon

We notice that some Western Region tender locomotives have lately come out of shops, after overhaul, without the familiar capuchon, or deflector, on the chimney. This is a very minor change of detail, but it makes a surprising and striking alteration to the appearance of the engines concerned. So far, we have noted a " Star," two " Halls " and a Dean 0-6-0 without capuchons, and we shall be interested to see if the practice is to be general.

For a great many years, it has been Swindon practice to omit the capuchon from chimneys on tank engines, though there have been a few exceptions during that time ; but a tender engine so treated has, until recently, been an extremely rare sight.

Locomotive and General Railway Photographs

We have been advised that this business has changed ownership, and is now in the hands of Mr. S. Miles Davey, 12, Upper Belgrave Road, Bristol 8, and all future communications should be sent there.

How It Was Done

From *Rhodesia Railways Magazine* we extract the following, with all due acknowledgments: A man interested in model railways offered trucks, coaches and engines to his three boys, provided they could divide them as follows: Half to the eldest son, one-third to the second, and a ninth to the youngest son. They were puzzled and sought the advice of a friend. How did they solve the problem so that they could make up their trains and have a good time ?

(The friend added one of his own engines to the seventeen vehicles being divided, making eighteen in all. The eldest son took his half, nine vehicles. The second took his third, six vehicles. The youngest took his ninth, two vehicles. The total is seventeen trucks, coaches and engines. The friend then was able to take back the vehicle he had lent for the division, and everybody was happy.)

Huddersfield Railway Circle Exhibition

The Huddersfield Railway Circle, held its first large public exhibition from April 6th to 11th. It was opened by the Mayor of Huddersfield.

The exhibition embraced the fullest possible range, and to avoid confining itself to models alone a cinema was in constant operation, showing films of railway interest.

A second room was devoted to the display of over 200 photographs submitted by amateur railway photographers from all parts of the country who were taking part in a competition that was a major feature of the exhibition.

Over 100 models were displayed on stands titled The West Yorkshire Railway, The W. B. Stocks' Stand, The Manchester Model Railway Society, The Leeds Model Railway Society, The Tal-y-Llyn Railway Preservation Society, and Tramways. There were 18 individual exhibitors.

The largest single model on show was the 18 mm. gauge West Yorkshire Railway. This fine model railway, requiring several operators to demonstrate properly, was the work of three members (J. D. Sutcliffe, D. Robinson and E. Blakey) who each built his section independently and experienced considerable relief when they all joined up at the exhibition in the manner intended. The scheme was to provide a main line, roughly horse-shoe shaped, running between two large terminal stations with a branch from an intermediate junction serving a goods depot strongly reminiscent of traditional Lancashire and Yorkshire Railway practice. All the locomotives were electrically controlled and though modern types predominated an ex L. & Y. 2-4-2 radial tank and a small Sentinel shunting locomotive added character and variety to the motive power department. Signals and points were remotely controlled and the automatic coupling and uncoupling facilities gave immense realism to the terminal and shunting operations.

RAILWAY TOPICS

BY J. N. MASKELYNE, A.I.LOCO.E.

THE ROYAL TRAIN

IN this Coronation year of 1953, some reference to Royal trains is appropriate, and as I have not previously written anything about this subject in these Railway Topics, I am taking the opportunity of making amends. I do not propose to deal with the history of Royal travel and its development, but rather with the latest special rolling stock owned by British Railways and used exclusively by H.M. the Queen and H.R.H. the Duke of Edinburgh for their railway journeys.

I have never had the good fortune to inspect the interior of the Royal coaches ; but I know what they look like from outside, and I must say that, apart from their scrupulous cleanliness, I find them rather disappointing ! But I suppose that I am biased because I clearly recall the old L.B.S.C.R., L.N.W.R., G.W.R. and G.E.R. Royal trains, all of which were, to me, things of beauty and joys for ever ! They no longer exist, but have been replaced by one that exemplifies, as it should, the optimum of comfort and convenience in railway travel.

Some of its vehicles, I believe, formed part of the former L.N.W.R. Royal train, but are now modernised and brought up to date. The three main cars, however, are comparatively new and

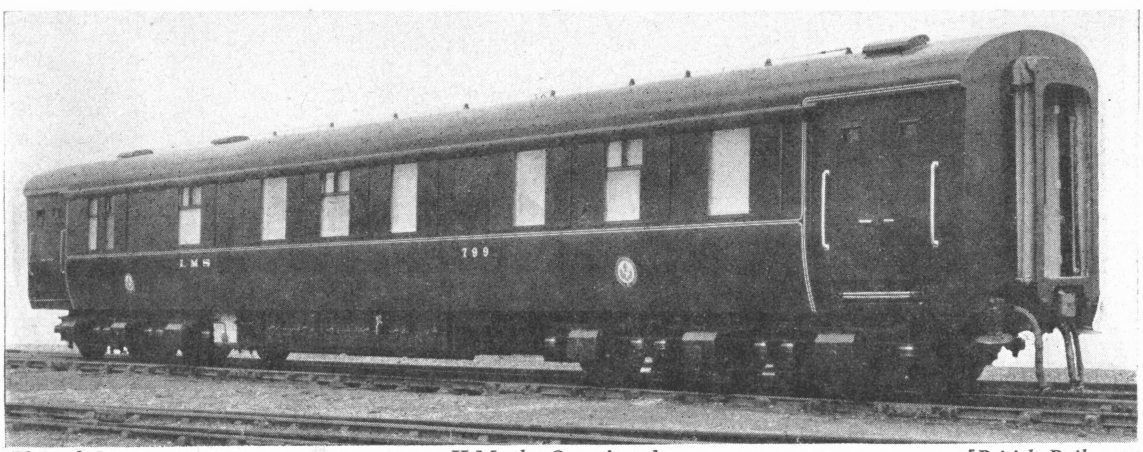


Photo by] *H.M. the Queen's saloon* [*British Railways*

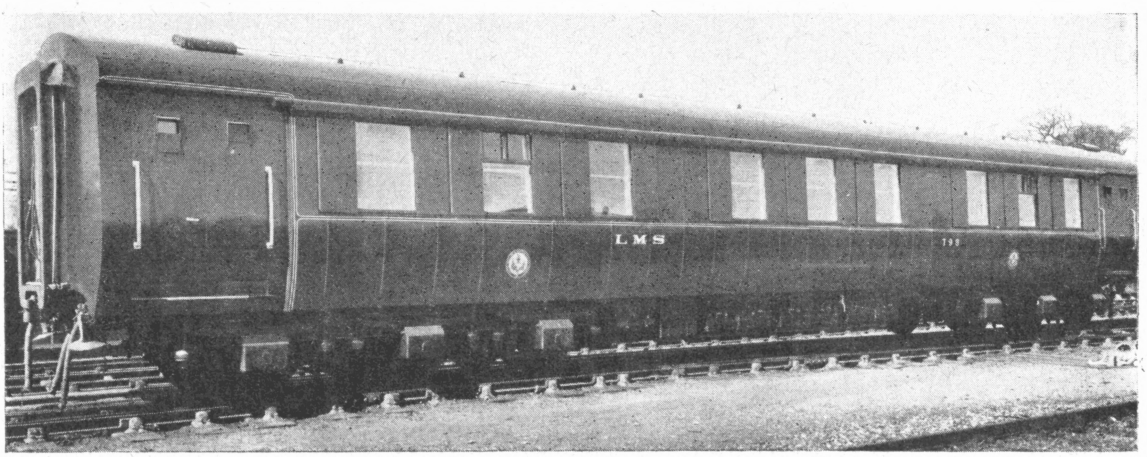
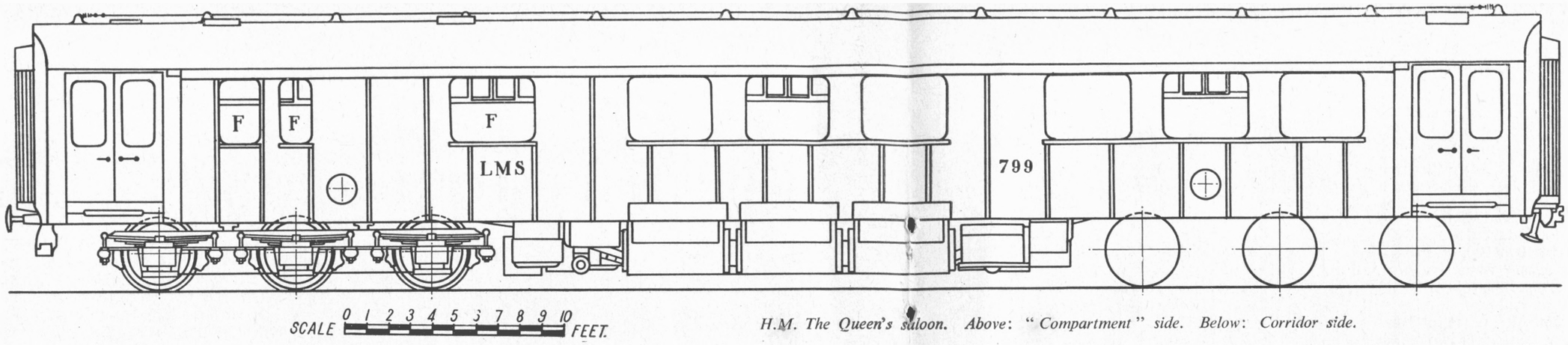


Photo by] *H.R.H. the Duke of Edinburgh's saloon* [*British Railways*

THE ROYAL COACHES

The photographs show the saloons with window shutters fitted. The full extent of the windows is shown in the drawings.



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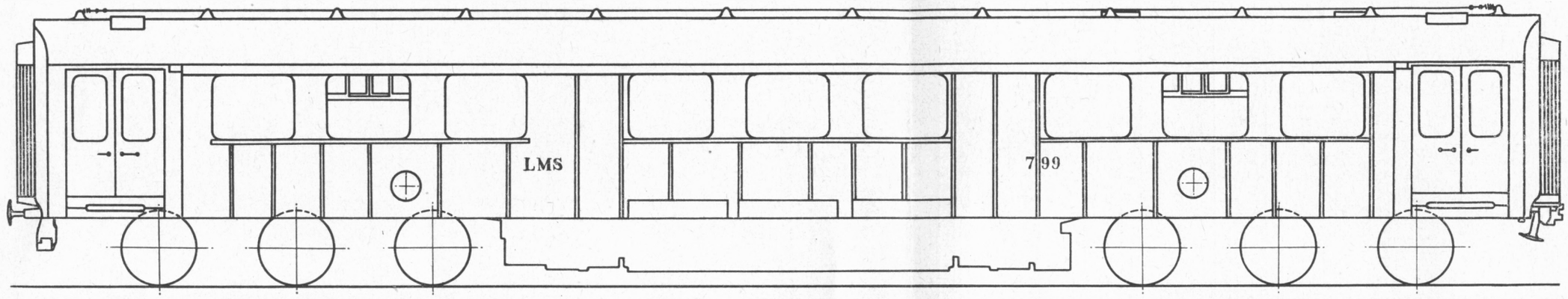
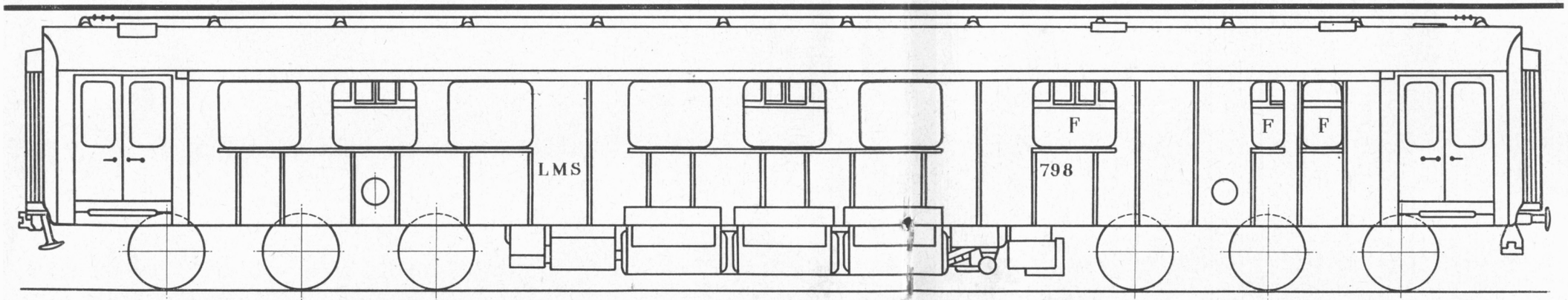
H.M. The Queen's saloon. Above: "Compartment" side. Below: Corridor side.





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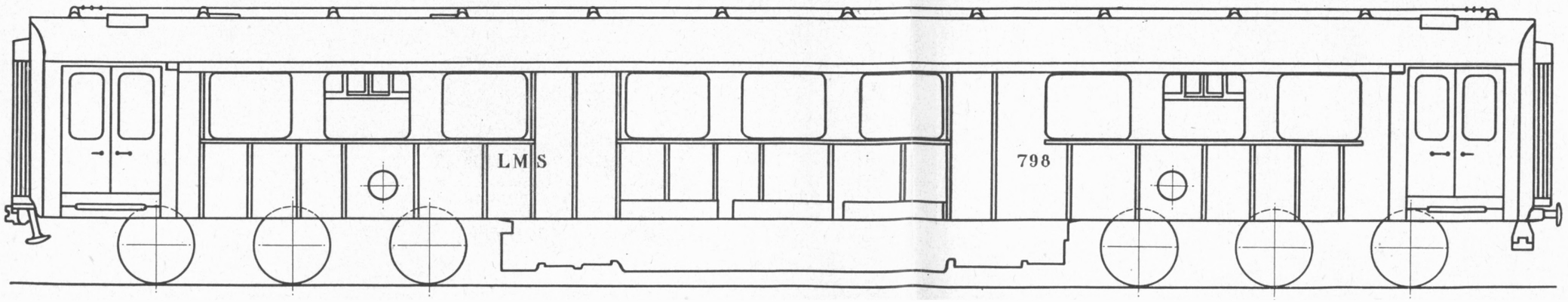
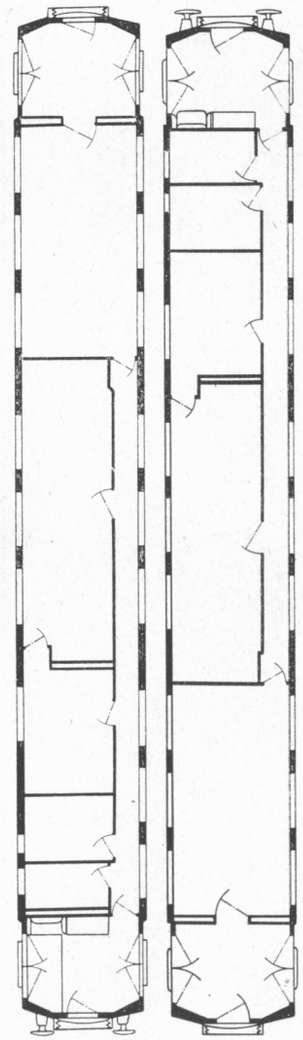
H.R.H. The Duke of Edinburgh's saloon. Above: "Compartment" side. Below: Corridor side.





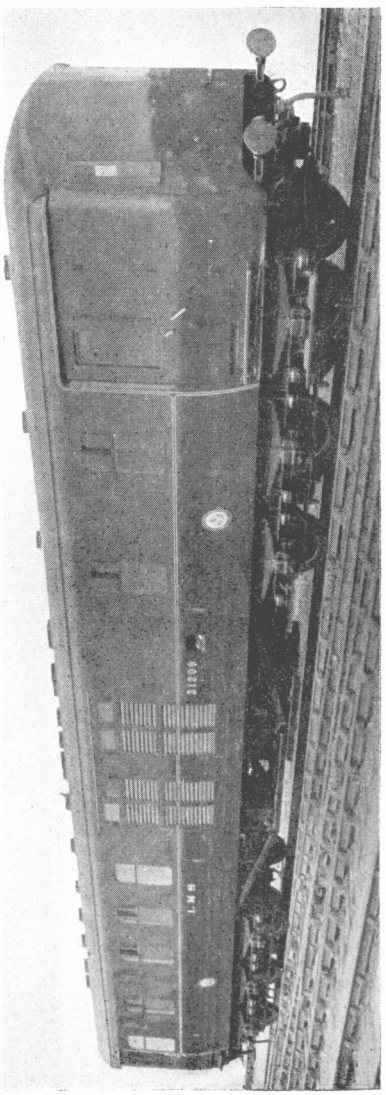
Plan of saloon No. 799

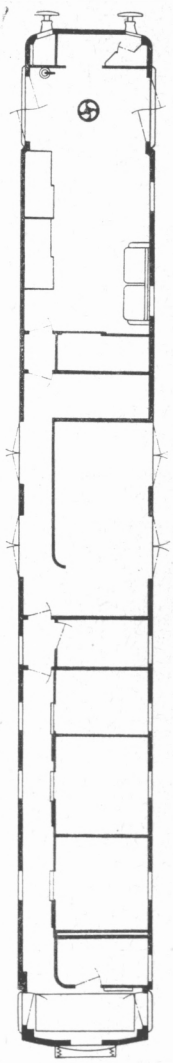
Plan of saloon No. 798

were built by the L.M.S.R. at Wolverton in 1941 ; they comprise two saloons and one car which is equipped with electric generators, a power brake, hand brake, luggage space and sleeping accommodation for staff. The drawings reproduced herewith give an indication of the arrangements in each car, as well as the overall dimensions.

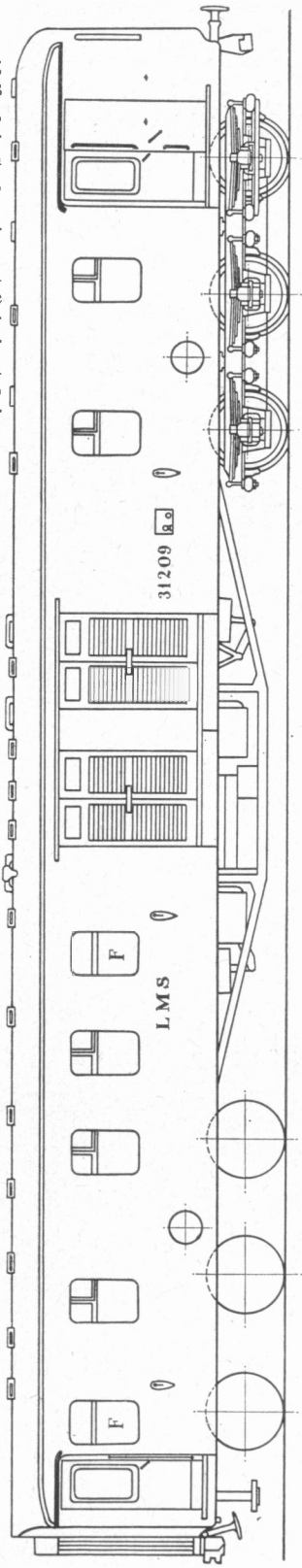
The two saloons run on specially designed, six-wheeled bogies with journals 10 in. long by 5 in. diameter. The wheel tyres are coned 1 in 100, and the weight of each vehicle is 57 tons. With the object of eliminating noise, as far as possible, rubber shock-absorbing pads and washers are used wherever there would normally be metal-to-metal contact in the running gear. Brake equipment comprises two 24 in. diameter vacuum cylinders per car, one for each bogie, with two brake blocks for each wheel.

(*Continued on page* 127)





Plan of "Power" car



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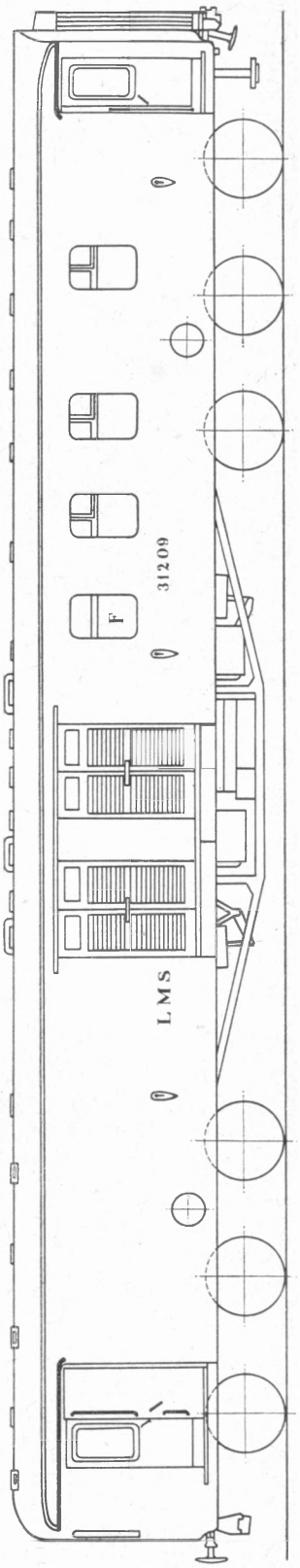
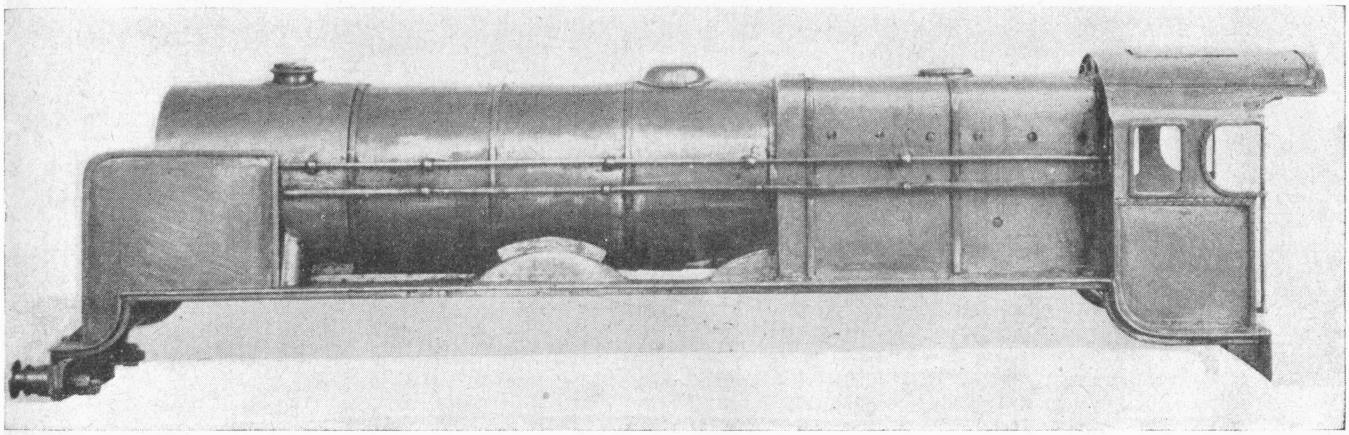


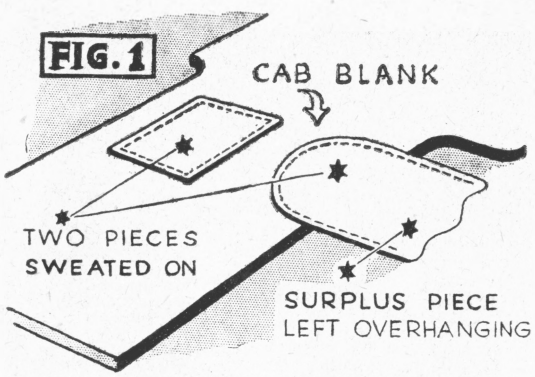
"Power" car. Above: Compartment side. Below: Corridor side

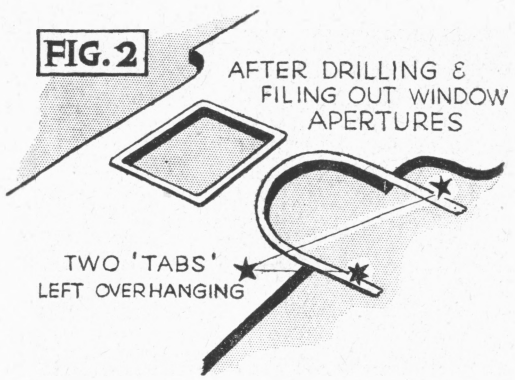
The Gentle Art of Beading

by R. Kinsey

"BEADING" in the smaller scales has always been one of the less easy aspects of model locomotive construction Most authors warn the tyro right off the subject, and if the job is tackled by chasing bits of fuse wire round awkward bends with a very hot iron, then I would agree heartily with these experts. There is, however, another way of tackling this problem of beading which not only gives good results, but is easy enough for the beginner to attempt with confidence. Figs. 1 and 2 show the application of this method to the cab windows of a Royal Scot prototype. The sequence of operations is as follows : mark out the cab blank, and scribe the area of the window apertures *plus* the beading. Cut out the cab, but leave the window areas solid for the time being. Now mark out the window area, again plus beading, this time on a separate piece of very thin metal. Cut these out, and sweat them in their appropriate places on the main cab blank. Now drill and file out the *window* apertures as normal. The thin piece of metal surround which remains after this operation will give a good impression of beading. Fig. 2 shows that two tabs have been left overhanging from the rear window; it is advisable to do this, as when these are bent back they make a sound and neat anchorage for the cab hand-rails. Fig. 3 shows a 4 mm. model under construction on which this method of beading has been used. The detail on the smoke deflector plates was achieved in the same way. There are of course many other applications for this system; undoubtedly the reader is already thinking of some to suit his own particular requirements.







Talking Shop

THE illustrations at the bottom of this column show the principle of the "OO" gauge Universal point manufactured by MESSRS. G. & R. WRENN, of 123, Lee Road, London, S.E.3. To describe the action briefly, the two closure rails are pivoted on one eyelet each at a distance approximately half-way between the point blade and the crossing. When the tie-rod sets the blades for, say, the curve, the wing rail attached to the curved closure rail is pushed against the straight stock rail beyond the nose of the crossing, so that it not only provides a continuous road, but also makes electrical contact, doing away with the necessity for bonding, although in most cases insulating gaps must be made beyond the point. At the same time, the wing rail attached to the straight closure rail moves away from the crossing to form a check rail.

Thus, at a very small sacrifice of appearance, the point will take any "OO" gauge wheel standards —even the "Trix" wheels which are the farthest removed from B.R.M.S.B. standards—and it is obviously the answer for the man who wants to run mixed standards and who does not insist on exact prototype crossing design. The alignment set up on both roads is well nigh perfect and the point costs 10s. 6d.—only 9d. more than the other two-rail turnouts. I should point out that this Universal point is not intended to replace the other types of point and all the existing range will continue to be available.

New literature produced by this company includes some general notes on the installation and layout of Wrenn track, suggested layout designs and wiring diagrams for the various points and crossings. The leaflets are available from dealers or direct from the manufacturers on supply of a stamped addressed envelope.

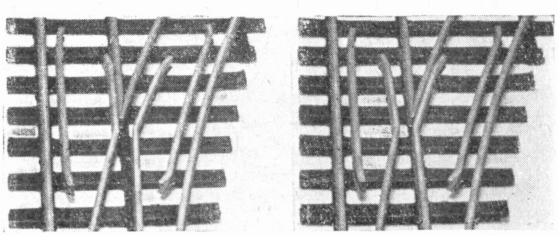
Peco News

THE PRITCHARD PATENT PRODUCT CO. LTD., of Pecoway, Station Road, Seaton, Devon, are producing a number of ingenious adaptor rails for joining the various kinds of proprietary tracks to Pecoway. These adaptors have special die-cast sections with one end to "scale" standards and the other end to fit the appropriate type of track. The Trix adaptor, price 3s. 8d., is shown in the attached illustration. The adaptors for Graham Farish or Wrenn track are 2s. 5d. each, those for Hornby Dublo track are 3s. 3d. each and those for Rovex track are 2s. 9d. each.

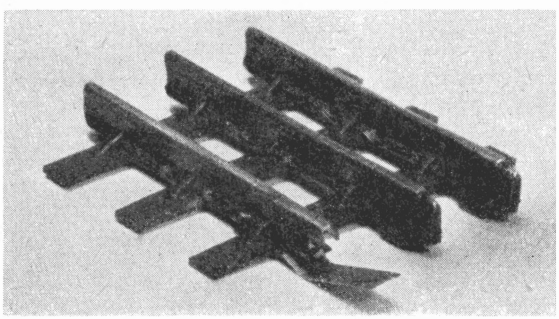
The other picture shows the Peco-Simplex Minor de-coupling unit which is of use where sub-base-board mounting is impossible and being somewhat cheaper than the major unit, it will appeal to those who can accept the slight loss of realism. The unit does not require operation as does the major unit and it is fixed by two screws in as many minutes. The price is 1s. 10d.

New "Bilteezi" Models

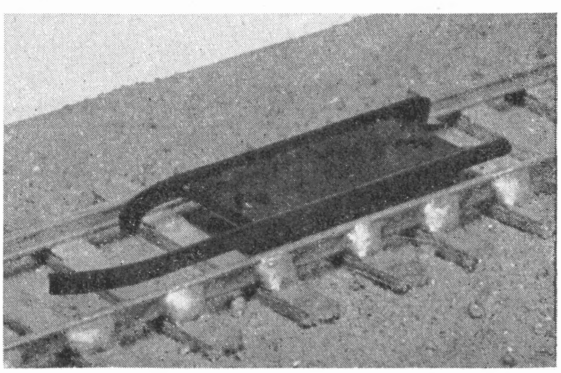
The last two illustrations show new developments in the "Bilteezi" range of card parts marketed by HAMBLINGS, of 10, Cecil Court, Charing Cross Road, London, W.C.2. First is shown an example of low-



Action of Wrenn's Universal point



Peco adaptor rail for Trix track



Peco-Simplex Minor de-coupler

relief modelling designed by R. G. Vacy-Ash, using standard " Bilteezi " cards from series " A " sheet Nos. 1, 4 and 6. A similar application can be made of the series " B " sheet No. 2 to provide a factory background. A leaflet describing the construction of these low-relief models is available from Hamblings.

Second, I include a photograph showing one type of country signal box which can be made up from the new " Bilteezi " sheet No. " B5," price 1s. 10d. each. With this sheet two signal boxes and ground frames can be constructed and they certainly make up into attractive and convincing models.

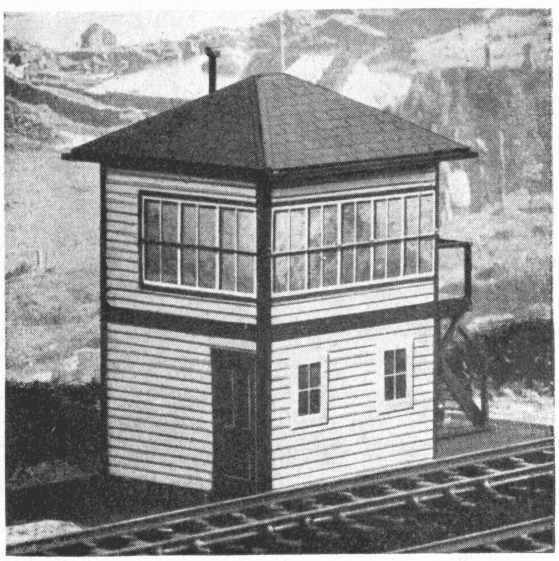
Important

Readers sending for the BASSETT-LOWKE Gauge " O " model railway catalogue G.O. 43 should remit 1s. 6d. and not 1s., which was inaccurately quoted in the advertisement on page ii of our May issue.

Guy J. Chesmore

Above: Half relief modelling with " Bilteezi " parts.

Below: One of the new " Bilteezi " signal boxes



RAILWAY TOPICS

(*Continued from page* 124)

All the vehicles have hinged side-buffers and hinged buck-eye couplers, so that they may be coupled to coaches having ordinary standard buffing and draw gear.

The roof, side and end panels of each car are of 16-s.w.g. steel sheets with welded joints, forming one complete panel from end to end. The side panels of the body extend downwards below solebar level, forming a valance and giving a pleasing continuity of line. The windows are double glazed with toughened glass $\frac{1}{4}$ in. thick. A dehydrator is fitted into the $\frac{1}{2}$-in. space between the inner and outer layers of glass, to prevent condensation.

Special attention has been given to interior decoration, air-conditioning and soundproofing, and the general arrangement is the same in both cars, consisting of lounge, bedroom, bathroom and sleeping berths and lavatories for personal attendants.

At each end of the saloons, there is a spacious vestibule balcony, with recessed double doors on both sides. Folding steps, operated by hand from outside the vehicles, are fitted below these doors. When the steps are in the open poisition, a red electric warning light is displayed near the solebar, not only to illuminate the bottom steps, but also to indicate that the steps in this position exceed the loading-gauge. Pullman gangway equipment is provided.

The third vehicle weighs 52 tons ; it runs on standard six-wheeled bogies and, in addition to the vacuum brake equipment, it has a hand-brake operating on both bogies ; its electrical equipment includes generators for providing power for lighting, heating and cooking.

These cars may seem to be very eleborate ; but royalty is often called upon to travel in conditions and to meet situations that are unknown to the normal railway traveller. The Royal train sometimes has to serve as a home for days on end, and something approaching home comforts have to be provided.

I must acknowledge my indebtedness to the courtesy of *The Railway Gazette* for providing particulars to enable me to describe the fine railway coaches and to prepare drawings of them.

EDITOR'S MAILBAG

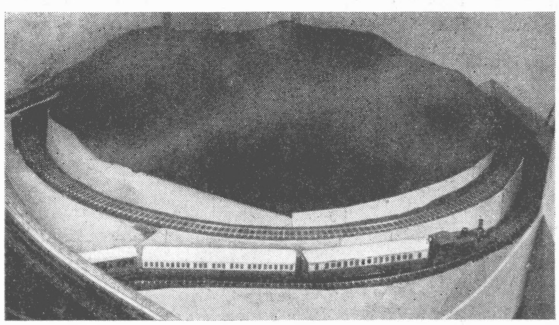
Minimum Radius Curves

DEAR SIR,—Judging by recent conversations with comparative newcomers to the hobby, Mr. Nicholls' remarks about the radius of curves in the March MODEL RAILWAY NEWS are timely. It would seem that the recommendations of the B.R.M.S.B. and well-intentioned authors of books have given the impression that 3 ft. radius is the practical minimum for " OO " curves and not simply a *desirable* minimum.

While it is true that greater care is necessary in setting out and laying sharper curves (a slight misalignment can reduce a nominal 2 ft. radius curve to 1 ft. 6 in.) " OO " models of nearly all British prototypes can safely negotiate 2 ft. curves. This is the minimum that I work to, and all my stock, including 4-6-2s, 0-8-0s, 2-10-0 and 4-8-2 with flanges on all the wheels, can operate over this radius without gauge widening. Actually the shortest radius in use on the Irthing Vale is the 2 ft. 3½ in. of one of the return loops, continuous through 270 deg., and 20 car passenger trains and 100 wagon empty mineral trains work over this without difficulty. Granted that 60 ft. stock is not a pretty sight on these curves, but return loops must in any case be concealed for realism and the saving of space between 3 ft. and 2 ft. radius loops is considerable, in many locations making their use possible.

On my Castle Carrock branch five car trains of 61 ft. 6 in. Gresley stock and 50 wagon trains have been running over 1 ft. 10 in. radius main line curves since 1935. (Of course, in those days, there was no one to tell me it was impossible !)

The photograph enclosed was taken in 1948 and shows a West Midland engine with a train of 50 ft. stock on a 1 ft. 8 in. curve on the now abandoned Stanley Main Colliery branch, built in the sitting room of our flat at Preston. The overall dimensions of the layout were 11 ft. × 3 ft. 6 in. and it had a 40 ft. continuous run. The spiral shown was 1 ft. 6 in. radius on a gradient of 1 in 40, but a Reidpath diecast 0-6-0T with Zenith 5-pole motor could *push* 20 wagons up and round it !



If one is prepared to limit the size of stock in use, very interesting lines can be designed in limited space with 1 ft. 6 in. radius curves which will give far more " operational fun " than a more restricted layout using wider curves. I hope these remarks will encourage others to adopt sharper curves where necessary and to get out of the habit of thinking in terms of 3 ft. minimum radius, thus providing greater freedom or design and allowing advantage to be taken of the " OO " scale-gauge relationship.

Yours faithfully,

London, N.W.3. FLEETWOOD SHAWE.

Trade Catalogues

DEAR SIR,—I think it is about time that the manufacturers of model railway goods should send free catalogues on request. After all, there is plenty of paper about and I do object to having to pay, even a small amount, to obtain a catalogue.

The average English catalogue of model railway goods leaves much to be desired, whereas those from the U.S.A. and Germany are most excellent productions, contain a wealth of detail and are entirely free for the asking.

I believe I am right in saying that only one English manufacturer will send a catalogue on request.

Manufacturers should know that it they want to sell their goods they should advertise.

Yours faithfully,

" THE AMATEUR "

Cab Control

DEAR SIR,—I read with interest the recent articles on " cab " control, and also that on auto-switched controllers. Two possible improvements occurred to me.

The first was prompted by a remark in the latter article, that when a section inadvertently gets tacked to two controllers the sparks begin to fly. This state of affairs can be avoided by a simple system of warning lights. Each section switch would have another switched ganged to it, so that when an operator switched in a section, the extra switch so thrown would connect in circuit a series of red warning lights above the corresponding section switches of the other controllers. Thus each operator could tell at a glance which sections were under the control of other operators.

The second point arose from the second part of the article on cab control on " Lutton." On the system described the signalmen, when accepting or offering trains, appear to spend more time switching on and off sections, than in operating signals and points, i.e., once having accepted a train they seem to have little more control over its movements until it arrives. I think there would be an improvement here if each signal had on-off control of power to its own sub-section of line. Thus, whilst the driving of the train would be in the hands of one operator, the control of its subsequent movements would be in the hands of the signalmen along the route. I think this would add considerable realism to the operation of any system equipped with cab control.

Yours faithfully,

London, N.W.3. LT. P. H. LEE, B.Sc.,R.E.M.E.

Commercial Mechanisms

DEAR SIR,—I am in complete agreement with all Mr. C. Humphrey Leach has to say about commercial mechanisms; the more so as I too have recently purchased a " OO " locomotive which is both noisy in running and ridiculous in starting.

Poor starting, however, as I have lately learned to my surprise, is sometimes due to the permanent magnet itself, the idea being that the small amount of current applied to the armature at the moment of starting is insufficient to let the armature hold its own with the magnet; that is to say, if the armature presents a N-pole to the N-pole of the magnet the latters overmasters it and simply holds on to it as though it were merely a piece of soft-iron, which to all intents it is—it has so little magnetism in it.

The unfortunate owner then moves the controller round until enough current is going through the armature

to allow it to assert its polarity, which it does with frightful violence, thus producing the infamous jerk which puts a probably otherwise good model back in the toy class.

In view of all this, the obvious thing was to reduce the power of the p.m.; this was done without much trouble, and starting was brought within the limits of sense, not bad at all—but only at the cost of a much weakened motor and high current draw, to which last my 12 V globe in series oore silent, bright witness.

So I am back where I started; I can have either a model which operates like a toy, or a modified one to give some semblance of control which then becomes too feeble to haul anything and may do itself an injury by absorbing too many amps.

I now refer to a sentence in Mr. C. Humphrey Leach's letter, the one which begins, " Modellers find two-rail operation a series of jerks, pushes and shoves "; that, for a time, but to a less severe degree, was my own experience. But these things need not be. They can be overcome. For first it is not always dust on the rails which causes failure to start. It is much more likely that one wheel at least has lost contact with the rails, there being no springing and axles are not always dead in line.

The out way of that, of course, is to remove the conventional " back-of-the-wheel " collectors and provide a trailing bogie, whose 3-rail axles are insulated as regards either rail, to pick up the current via wheels, axles and frames, without any collector.

I have used this wheel contact method over a period of months for the lighting of two coaches and the lights never blink, even when the rails have not been cleaned for several weeks.

Similarly, on traction, the motor can be depended upon to start at all times. It no longer stalls at intervals, and runs a trifle more freely.

One other point; there are motors which really can start with a good approach to realism and they can run pretty slowly too; but even these will not run steadily at a given speed. Especially through even 3 ft. radius points, when no amount of finesse with the controller can compel them to push a train through a crossover with the slow, relentless movement so apparent in full size.

Amusing, is it not, that the lay spectator may be quite impressed by a very unrealistic electrically driven locomotive; but will smile when he sees you winding up what is to him a toy engine ?

Yours faithfully,

Glasgow, S3. P. H. WYLIE.

No Spare Parts ?

DEAR SIR,—Money is said to be getting " tighter " and demand for the more expensive items getting less. We model railwayites have known hard times before, both in the trade and among the customers, but at least we could get the " bits and pieces " in the inter-war years and use our hands for their right purpose and build the rest ourselves.

Now there are on the market in the " OO " field many models and " near models " which, while doubtless excellent in themselves and undoubtedly in many cases very fine value for money, are not just every modeller's " cup of tea," and yet many of the parts are the very thing for the basis of constructing fine free-lance and prototypical models to suit individual tastes. The supply of such parts is simple and in the past was looked upon as a normal part of a model maker's business ; no difficulty was raised to any request for such. It opens up a sideline not to be despised. Now, however, there are an increasing number of British manufacturers who point-blank refuse to supply parts even, in some cases, for repairs. I could list five firms whose names are club-room words in our craft who so refuse, wholly or partly, to supply parts, even unfinished castings as they come from the mould before they reach the production line.

Now, in America—hold your hat, John Bull !—the leading model rail magazine has gone out of its way to consult the trade and then make clear in an editorial article that such parts for home construction are available and, in case of local supply difficulties, a letter to the manufacturers will prompt them to arrange a supply.

" *Interference ? Whenever he hears ' What's My Line ? ' he shouts ' Great Western ' and we get the Cornish Riviera Express instead of Gilbert Harding !* "

Well now, John " META " Bull, what about it ?

And you, fellow modellers, what do you say ?

Yours faithfully,

Edinburgh. W. LOCH KIDSTON.

Commercial Mechanisms

DEAR SIR,—As a comparative newcomer to " OO " gauge model railways, an owner of one of those British maligned models, and an ex-railwayman and locomotive engineer, I enter as a cheeky David against the Goliaths in this very interesting controversy. I am not prepared to let the critics have all their own way. I have made an intensive study of model railways and the result is illuminating. I find the present controversy rather similar to comparing the performance of a Ford V8 with that of an Austin 7 ; or that of an American locomotive with its English counterpart. The demands in both cases are entirely different as are also the circumstances affecting them. The American prototype pulls its 100-wagon load with the same ability that one of our " O4 " class 2-8-0s pulls in this country. I dare say that a British manufacturer could and would produce a suitably powered model of our British equivalent if there was a demand, but as there is no apparent market for such mass-production he is not interested.

The deciding factor with the British maker of commercial mechanisms is that he has to produce a power unit to fit into a model from the size of a diminutive tanker to a Pacific and he does the best with restricted space. Not so his American counterpart, who has mammoth locomotives with capacious tenders into which to fit their motors. When you consider the average layout of model railways in this country where a 4-4-0 express engine and an 0-6-0 with flangeless central drivers goods can comfortably pull normal scale-length passenger and goods trains over often small-radii curves due to restricted space, then I think British motors fulfil demands.

(*Continued on page* 151)

CONVERTING A UNIVERSAL MOTOR TO D.C.

by K. J. Hobley

MOST of the pre-war "O" gauge Hornby electric locomotives were fitted with a universal motor to run off alternating current and those not equipped with automatic reversing had to be reversed by means of a switch in the cab, which meant that complete remote control was impossible.

I recently purchased, quite cheaply, one of these

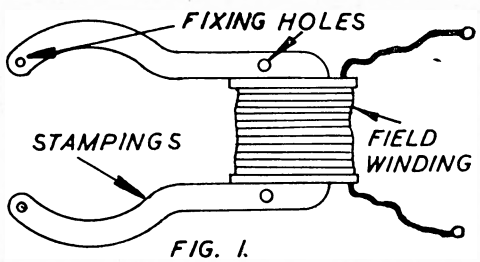


FIG. 1.

mechanisms and at once started experimenting with the motor to see what could be done in the way of remote reversing without incurring much financial outlay.

It was at once obvious that an auto-reverse was out of the question firstly because I had not the skill or the equipment to make one and secondly because there did not seem to be much spare space in the locomotive to fit solenoids and switches. The rectifier method on the field winding was tried without success due to the rather large current requirements of these pre-war mechanisms. This particular model took about 1½ amps which means quite a hefty rectifier unit which has to be carried in the cab or tender.

The only solution seemed to be to fit a permanent magnet in place of the wound field and this was finally decided upon. The problem then arose : where could a magnet of the correct dimensions be

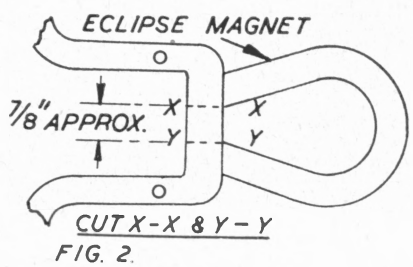


FIG. 2.

obtained ? After much searching, a very simple solution was discovered, and for the modest sum of 3s. 6d. plus two evenings' work, I have a locomotive whose performance equals many up-to-date models costing many pounds.

For those readers interested in this conversion, the work involved should present no difficulty even to the man with little engineering ability.

First of all remove the motor unit from the locomotive. Next, after removing the connecting-rods and driving wheels it will be found that the removal of four nuts will enable the mechanism frame to be parted. Care should be taken to remove the brush springs and brushes before parting the frame otherwise they may fly out and be lost.

When the frame has been parted the removal of a further four nuts will enable the field stampings and winding to be removed in one piece. At this point the existing reversing switch should be removed completely together with any associated wiring as this will not be required again.

Proceeding with the wound field, Fig. 1, the winding should be removed by unwinding, when it will be found that the bobbin can be removed piece by piece leaving the plain block of field stampings which are to act as pole pieces to the magnets now to be obtained. The magnets used in my conversion were two small horse-shoe "Eclipse" pocket magnets which may be purchased for 1s. 9d. each

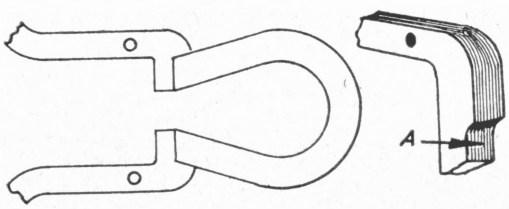


FIG. 3.

at most ironmongers. These magnets have a polar gap of approximately ⅞ in. and are a little less in thickness than the stack of stampings.

The field laminations should now be marked for cutting to accommodate the magnets, Fig. 2. After cutting *x-x*, *y-y*, the two halves of the laminations must then be rebated to make a snug fit for the pair of magnets, Fig. 3. Care must be taken to get surface *A* as flat as possible so that contact is made with the whole surface of the magnet's pole. If good contact is not made at this point the full value of the magnetic flux required across the poles will not be obtained with a consequent loss of motor efficiency. The two sections of the field laminations are now replaced on the motor frame and the magnets are fitted, care being taken to see that they are fitted with like poles together, i.e., north to north and south to south.

Before fixing permanently, which is done by drilling a hole in the frame and using a long bolt and strap which should be of brass, Figs. 4 and 5, or some other non-ferrous metal, the motor should be

re-assembled and a test made for direction of rotation by applying power to the two leads from the brushes. If all is satisfactory the motor should be taken down again and the magnets securely fixed.

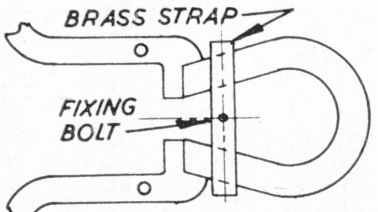


FIG. 4.

One lead from the brushes is fixed to the frame and the other to the collector shoe. The correct connections will have to be found by trial and error so that the converted locomotive will behave in the same way under control as any other locomotives which may be used on the layout.

Some of the electrically minded readers may object to the fact that, as the resistance of the field winding is now absent, the armature will be overloaded. Theoretically this is so, but in practice I have not had any trouble in that direction and one can always have a little more resistance in circuit on the control box and safeguard the motor by running trains of reasonable length at reasonable speeds.

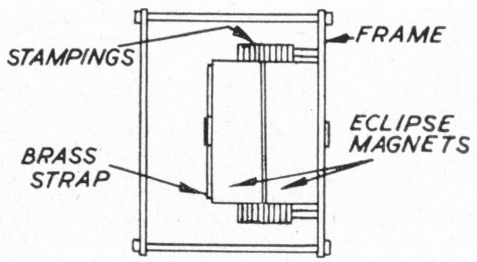


FIG. 5.

EDITOR'S MAILBAG

(*Continued from page* 129)

Should there be more Irving Vale layouts with well laid track and an abundance of rolling stock, then public outcry would bring about British equivalents of the Pitman motors. I am one, therefore, who while not declaring that British units are in any way perfect, does say, " Don't blame the British motor ; it's doing its best."

Where I am prepared to agree with Mr. Fleetwood Shawe is in the fact that given a willing motor, we do not allow it to give its best performance. We take a small motor restricted in overall size, and couple it up with some sort of flexible coupling to reduction gearing. Universal joints and torque rods may be added in the drive to the wheels whose axles run in plain bearings. We add all the detail work of coupling rods, slide bars and crossheads. We couple up our locomotive to a close-coupled train whose friction losses are proportionately high. We drive it round tight curves often devoid of super-elevation and up gradients unavoidably steep. Throw in opportunities for high resistance current collection, and we have a picture of the model railway martyr. We pump in volts and amps to overcome this accumulative inertia and wonder why the motor vomits smoke and becomes heated. I am surprised it does not vomit fire and brimstone !

Both the electric motor and steam turbine are high-revving machines. They work best in their optimum range of revs. We may laugh at such gadgets as flywheels and magnetic clutches, but they are a means of letting the motor develop sufficient energy before taking up the load. If our model makers would concentrate on silent and efficient reduction gearing with minimum frictional losses, and even such additions as reliable magnetic clutches, performance of motors under load at the lower speed range would be more satisfactory, and the higher speeds would adjust themselves. Who wants his model train hurtling round his far from perfect layout at Comet-jet speeds ? Most model railwayites would like smooth, powerful progressive slow running.

Yours faithfully,

Colne, Lancs. H. PUGHE MORGAN.

Commercial Mechanisms

DEAR SIR,—I have no connection with the trade but I feel I must answer some of the destructive criticism written over the past few months under the above heading, and at the same time suggest possible solutions to the problems of some of the writers.

Mr. Shawe apparently has a source of supply of American motors and is satisfied with them, so that his problems are small. However, in his own words the Pitman " DC 71 is a large motor . . . it will only fit large British prototypes in ' OO ' such as Pacifics." I maintain, therefore, that for modellers of *British* prototypes a motor of this size is not a practical proposition.

This brings me to my second point. If a motor of " American " type and size were placed on the market would the trade receive the support of all the people who now complain about the British motors ?

I suggest that Mr. Shawe would be doing a great service for British modellers by providing, through the medium of the MODEL RAILWAY NEWS, detailed drawings, dimensions and specifications of the American motors. Those of us who feel so inclined can then construct our own motors to those specifications. This may not be so formidable as it sounds. The drawings would show whether the motors could be fitted.

With regard to worms and worm wheels I suggest, as he is a modeller, that Mr. Kerr tries making his own if he requires special types. This is interesting work and well worth the time spent on it. If he feels unable to tackle it he may care to consult the " Small Ads " of *The Model Engineer*, where keen amateurs are prepared to undertake such work at low cost.

Mr. Leach has purchased several motors, all of which, in his own words, were " duds." It is possible that he did not fit them correctly to his chassis ? If this is so he may experience similar troubles with motors of any origin, American or otherwise. If the motors really are " duds," I suggest he studies the Sale of Goods Act. At least, he can get his money back.

Yours faithfully,

London, S.W.16. J. A. C. HUGHES.

FOR THE BOOKSHELF

Royal Trains, by Cecil J. Allen. (Hampton Court : Ian Allan Ltd.) 40 pages, size 6 in. by 9 in. Illustrated. Price 2s. 6d.

As a brief history of Royal travel by rail, this little book deserves a warm reception ; it is one of the most entertaining accounts that Mr. C. J. Allen has ever written, and ranges in mood from gay, as in some delightful anecdotes of Queen Victoria, to serious, as in the descriptions of Royal Funeral journeys. Between these two extremes, the story is always full of interest, and includes complete details of that astonishing performance of the G.W.R. engine No. 3433, *City of Bath*, which on July 14th, 1903, whisked a Royal special from Paddington to Plymouth, then 245½ miles, in 233 min. 35 sec.

The illustrations contain many which, to us, are unfamiliar and include a few delightfully informal snapshots. The whole production is on stout art-paper and gives most excellent value for a very modest price.

The Boys' Book of Model Making, edited by Station Abbey. (London : Ward Lock & Co Ltd.) 220 pages, size 7½ in. by 9½ in. Illustrated. Price 21s.

This book makes an excellent gift for any boy who shows an aptitude for model making ; its contents consist of twenty chapters, each of which is complete in itself, dealing with some particular subject or branch of the hobby, written by an acknowledged and well-known writer ; among the contributors are : A. N. Carter, H. B. Gwyther, J. H. Ahern, E. F. Carter, W. J. Hughes, G. H. Deason, R. H. Warring, Lieut-Cdr. J. H. Craine, C. E. Page and C. Baker.

There are 31 half-tone illustrations, printed on art-paper inserts, and numerous excellent drawings and diagrams interspersed in the text.

Here and there, the editing has left a little to be desired, for we come upon a few cryptical or questionable phrases. For example, on page 75, E. F. Carter writes of " an even wooden surface of wood," and on page 86 W. J. Hughes remarks, in parenthesis, " this engine and boiler are very similar in design " ! Such slips apart, however, the text is lucid and admirably printed.

There are two large folded sheets of working drawings, one for a simple and easily-constructed working model steam roller, and the other for a neat model cabin-cruiser, both by W. J. Hughes. The inclusion of many " exploded " and perspective drawings is a commendable feature.

This book is one of the best guinea's-worth we have seen for a long time.

4,000 Miles on the Footplate, by O. S. Nock. (Hampton Court : Ian Allan Ltd.) 223 pages, size 5½ in. by 8½ in. Illustrated. Price 17s. 6d.

Two previous books on the footplate experiences of the same author established a kind of tradition which is admirably supported in this third volume. Here we have a further selection of trips made by Mr. Nock, nearly all of them in 1951 ; they range from high-speed express passenger trains to not-so-high-speed freight trains, yet each and every one of them has its own particular interest arising out of the fact that Mr. Nock takes care to describe in detail the conditions prevailing on the footplate each time. Passenger and freight trains of practically every sort come under observation, and in almost every run described there is an element of excitement that could never reach anybody riding in the train behind the engine. The illustrations consist of numerous photographs showing every kind of train dealt with in the text. This book is a thoroughly worthy successor to its predecessors.

The Railway Modeller Layout Plans, No. 1. (Published by Peco Publications and Publicity Ltd., Pecoway, Station Road, Seaton, Devon.) 20 pages, size 5½ in. by 7½ in. Price 1s. 3d.

This is the first of a proposed series of booklets containing a number of scale plans for projected, suggested or existing model railways. They cover a range of space areas varying from 6 ft. by 4 ft. to 60 ft. by 8 ft., and should be especially useful to anyone who is trying to plan the model railway that best suits his available space and his pocket. The plans are clearly reproduced, and throughout the set, carry standard symbols for identifying the various features, the key to which is printed in full on the inside front cover. We recommend this book especially to beginners and novices in the model railway hobby.

The Locomotives of the Great Western Railway, Part 2. (Published by the Railway Correspondence and Travel Society, Publications Officer, 18, Holland Avenue, Cheam, Sutton, Surrey.) 56 pages, size 6 in. by 8 in. Eighteen art-paper inserts. Coloured frontispiece. Price 10s.

This part is, in general style, similar to those already issued ; it deals exclusively with the broad gauge engines owned by the Great Western Railway, covering the entire period from 1837 until 1892. We are sure that never before has such a complete and comprehensive record of the broad gauge engines been collected together between the two covers of one book. Its principal author is Mr. P. J. T. Reed, who has spent a lifetime in collecting information about Great Western Railway locomotives, has written the text with enthusiasm and completed it in exemplary manner. Incidentally, Mr. Reed reveals himself as an artist of no mean attainments, to judge from the coloured frontispiece and the half-tone reproductions of three others of his paintings included among the illustrations.

The text relates one of the most interesting stories in the realm of locomotive history, and it gives very extensive particulars of every class of broad gauge engine built or acquired by the G.W.R. There are several interpolations, anecdotal and otherwise, which add a great deal to the interest of the narrative and provide a little light relief from the more technical side of the subject. Names and, where necessary, numbers of all the engines, together with dates of construction and withdrawal, are included. At the end there is a very useful list of the entire broad gauge locomotive stud, arranged in alphabetical and numerical order ; this serves as a very convenient cross-check on the main body of the text, to which it is a kind of index.

The very numerous illustrations are, in themselves, an almost complete visual record of the distinctive, often ungainly appearance of the engines. At the same time, a few of the pictures reveal surprisingly handsome and impressive designs in which can be discerned the beginnings of characteristic G.W.R. features.

We are of the opinion that this book is astonishingly good value for the price, and that, henceforth, it is destined to be the " classic " for this particular subject.

WITH THE CLUBS

The Model Railway Club

On Sunday, May 3rd, the museum at Derby was visited by members of the Leicester Model Railway Group and the M.R.C.

This visit, which was arranged by Leicester, was a great success. The visitors had the opportunity of examining the collection of drawings, blueprints, and photographs of the Midland Railway in the possession of the museum, and were also given the opportunity of a close inspection of the well-known Midland Railway " OF " layout, both from the front and from inside its case.

The outing concluded with tea and a few speeches.

There were over 40 people in the party, and we hope that similar excursions will be arranged in the future.

Meetings for June include a Southern track night on the 4th, and a lecture by Mr. R. K. Kirkland on " The Railways of County Donegal " on the 18th. Both meetings commence at 7.30 p.m. in the Ambulance Room, Waterloo Station, London, S.E.1.

Particulars of the club may be obtained from the Hon. Secretary: D. A. BOREHAM, 34, Shrewsbury Road, London, N.W.10.

The Gauge One Model Railway Association

The annual general meeting of the above association will be held at 2.30 p.m. on Saturday, June 13th, in the Ambulance Room, Waterloo Station, London, S.E.1. When the business of the meeting has been completed, an informal " get-together " will be held. A small layout will be erected for the occasion and some running will take place.

Full particulars of the association may be obtained from the Hon. Secretary, S. J. ROBERTS, 82, Trinity Court, Gray's Inn Road, London, W.C.1.

Birmingham Model Railway Club

All meetings at St. Thomas' School, Granville Street, commencing 6.45 p.m.

Meetings to September 2nd, 1953 :

June 11th. Thursday : Track night.
" 17th. Wednesday : Track night.
" 25th Thursday : Sheet metal working practice in model locomotive building, J. H. Moss (jnr.).
July 1st. Wednesday : Track night.
" 16th. Thursday : Track night.

During the forthcoming session, " Track Nights " will combine " Exhibition Track Construction " and " Test Track Operation." Members are invited to bring their own models finished or unfinished, on any of these nights, for demonstration running and general discussion as usual. With the object of accelerating its completion, the exhibition track will also be available for volunteers to work on, so no one need be short of something to do.

As usual, there will not be any meetings during August, but several outside visits have been arranged to motive power depots during the summer, and members will be given particulars in due course.

Hon. Secretary : JOSEPH H. MOSS, 163, Stonor Road, Hall Green, Birmingham, 28.

Ramsgate & District Model Club

An " At Home " will be held at the club's premises from September 21st to 26th inclusive from 6 p.m. to 10 p.m. daily and from 3 p.m to 10 p.m. on the Saturday.

Guests are invited from local patrons, modellers, etc., on special days leaving Tuesday and Friday evenings open to anyone who would care to come and see over the club and to view the demonstration of its activities, including a display of members' models.

On the Saturday it is hoped any club or society interested will pay us a mass visit and secretaries of some that are interested are asked to contact the club first so that arrangements can be made to make their visit pleasurable.

During the past year the Ramsgate Club has made good progress, membership has increased and several promising juniors have " come along."

During the summer months the workshop is open on Friday evenings *only* from 7 p.m. to 9 p.m. Visitors are always cordially welcomed at the club in Prnces Street, off Queen Street, Ramsgate.

Hon. Secretary : E. CHURCH, 14, St. Mildred's Avenue, Ramsgate.

Hornsey & District M.R.C.

The club has now found permanent premises off Holloway Road, near to the Highgate Archway.

The portable " OO " layout is well under way, all the bases have been completed and the track is now being laid. The model is rather ambitious measuring 22 ft. × 11 ft. 6 in. in 14 sections with stations on three levels.

The club meets every Tuesday at 7.30 p.m. Enquiries for membership from any " OO " enthusiasts would be welcomed. Hon. Secretary : S. BUCHANAN, 185, Boundary Road, Wood Green, London, N.22.

The Northolt Model Railway Club

The club's programme for the next 12 months was decided at the recent annual general meeting, our aim being to complete the layout as it stands during the next six months and then to start scenic work.

The club's track nights on the first Friday of each month continue to be successful, and temporary manual signalling is being installed to facilitate the smooth passage of trains from section to section during our track nights.

We invite new members who we are sure will find plenty to interest them. Club rooms, The Manor House, Northolt Village, convenient to Central Line Station, or 140 Bus Route. Hon. Secretary : R. G. TURNER, 5, Craven Avenue, Southall, Middlesex.

Wimbledon Model Railway Club

At our meeting on Wednesday, June 10th, we shall be hearing a talk on " The Isle of Man Railway " by Mr. S. D. G. Stanford who will illustrate his talk with photographs. Mr. J. N. Maskelyne has kindly consented to come along on July 8th and speak on some of his railway memories and he will be bringing a number of his earlier photographs.

Visitors and prospective members are always welcome at these meetings which are held at 32, Worple Road, Wimbledon, S.W.19, and start at 7.30 p.m. Further information can be obtained from the Hon. Secretary : R.C.J. DAY, Flat 1, 34, Maple Road, Surbiton, Surrey.

Leicester Model Railway Group

The next meeting will be held in the Hall of the Church of the Martyrs, Westcotes Drive, Leicester, at 7.30 p.m. on June 15th and will be a " models night," or if Mr. Jarvis is available it is hoped that he will be able to give his talk on " The Denver & Rio Grande Western Narrow Gauge Railway " which was unavoidably postponed at the April meeting. New and prospective members will be welcome.

Hon. Secretary : E. P. M. HAIRS, 29, Park Hill Drive, Leicester.

The Edinburgh and Lothians Miniature Railway Club

During February one of our members, Mr. J. Fairlie, gave us a lecture on articulated locomotives. Mr. Fairlie is a professional engineer, and his talk was illustrated with photographed diagrams from his own collection.

Our March attraction was a kind invitation by the local branch of the Stephenson Locomotive Society to a talk by Mr. O. S. Nock on Latest Locomotive Design.

The club is now in the progress of moving from the old station at Davidsons Mains to bigger and more central premises at Advocates Close in the High Street, Edinburgh. It is hoped that this change will increase the membership of the club, and the larger space at our disposal will enable us to have a library and workshop.

Hon. Secretary : A MURRAY, 98, Lothian Road, Edinburgh.

Reading Society of Model and Experimental Engineers

At a recent meeting an interesting illustrated history of the L.B.S.C., S.E.C. and S.W. Railways was given by the President, Mr. J. N. Maskelyne.

The Society is organising another rail trip to be held on Sunday, June 21st over about 120 miles of the Southern Region. Any persons interested are asked to communicate with the Hon. Secretary : J. SHAYLER, 14, Westwood Road, Tilehurst, Reading, Berks.

Cambridge & District Model Engineering Society

The main activities of the society during the past few weeks have been devoted to reorganisation of headquarters and workshops, these efforts have been amply repaid by the results.

The 16.5 mm. layout has been re-erected in its new location and work is proceeding to put it in a fair condition for operation in the near future.

Forthcoming events, in addition to our normal programme include a river trip, leaving Cambridge at 10 a.m. on June 14th and returning 8 p.m., the object being a visit, arranged by the courtesy of Mr. Clarke, to the old beam pumping engine at Stretham.

There will be a track night for live steamers at Cam Road on June 16th, and, of course, the usual Monday evening meetings for " OO " enthusiasts as well as workshop sessions each Tuesday, Wednesday and Thursday evenings.

Visitors are cordially invited to our meetings and should contact the Hon. Secretary : J. W. ATKIN, 16, Ross Street, Cambridge for further details.

LOOK OUT FOR THIS FILM

Pathe Pictorial No. 454, now showing at many cinemas throughout the country, includes a short sequence taken on Fleetwood Shawe's Irthing Vale line which will interest any railway modeller. Readers who recall our April cover picture will recognise the Mantua 2-8-2 in a number of the " shots."

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The Sports Depot (M/C) Ltd. for new and second hand model railway equipment. Gauge "O" trucks, etc., from 2s. to 4s. each. Clockwork lines 4d. and 6d. each, points 2s. 6d. each. Electric lines 9d each, points 5s. 6d. each. Hornby type bogie wheels, Gauge "O" 1s. 2½d. each. Driving wheels for Number "O" and "1" locomotive 1s. 9d. each. Graham Farish coaches 17s. 6d. Trix lines 1s. 6d. each. Controllers 10s. 6d. each. Transformers 30s. each. Trix "Switcher" locomotive 50s., tank 35s. Two-rail scale "OO" coaches, new, bargain price 21s. each. WE PURCHASE second hand locomotives and accessories, all sport equipment, golf clubs, etc. Send your goods for disposal on to us for quotation.—4/10, Princess Road, Moss Side, Manchester. Tel.: MOS. 1757.

Special Offer of "O" Gauge Second Hand Equipment. Locomotives, spring driven: 3 only, Lowke compounds, as new, £5 each; 2 Walker-Rymsdyck 0-6-0 tanks, as new, £5 each; 1 Maerklin "Flying Hamburger" railcar (twin set), £2; 1 Bassett-Lowke "Flying Scotsman," £6; 1 Exley post-war L.M.S. corridor coach, £2 5s.; 1 Lowke G.W.R. ditto (early type), 12s. 6d.; 1 Lowke L.N.W.R. dining car (Exley 4-wheel bogies) 17s. 6d.; 1 Lowke L.M.S. (taper boiler) steam 2-6-0, excellent condition, £7 12s. 6d.; 3 only Lowke 12 vol d.c. "Royal Scots," £6 each; 12 Lowke two-aspect c.l. signals, 5s. 6d. each; 3 only Lowke single t.p. signals, 5s. each; 2 only ditto double bracket, 7s. 6d. each, Also many other interesting items, a list of which will be sent on receipt of 2½d. stamp. Mail orders only to—R. G. DETTMAR & Co., Ashtead, Surrey.

West of England Modellers should send their requirements to—HARRIS'S TOY SHOP, 32, Chapel Street, Exmouth. Phone: 2028. Agents or stockists for all the principal model manufacturers.

Staffordshire's Model Shop since 1936. Model railwaymen always welcome. New "OO" layout.—J. W. BAGNALL, South Walls Road, Stafford. Tel.: 420, M.E.T.A.

Transformers for "direct" or "split potential." Rectifiers, auto cut-outs, ammeters, volt meters, reversing controllers, power units, large stocks. List s.a.e.—HARRY GILPIN, 76, High Street, Walton-on-Naze, Essex.

Handyman's Shop, 27, Blakey Moor, Blackburn. Agents for Acro, Peco, E.R.G., Walkers, Wrenns, Hamblings, etc. Hardboard strips (all sizes for tracklaying).

American "HO" passenger and freight stock. List s.a.e.—CRILLEY, 8, Hillside Drive, Port Glasgow.

A Good Model Requires a Good Motor Unit so use the R.M. five-pole motor as specified by British Railways. The most powerful unit on the market and at a reasonable price! Standard motor, **67s. 6d.**; Gear set (18-1), **8s. 6d.** Also—Cast-iron wheels with squared location, axles, bearings, chassis, stud contact collectors, complete locomotives or bodies. Full details—
R. G. DETTMAR & CO., The Model Railway Engineers, Ashtead, Surrey.

America's Most Authoritative Magazine "Model Railroader," one year post free, 39s. Back numbers 3s. 6d. each. Free booklet of other American magazines from—WILLEN LTD. (Dept. 42), 104, Fleet Street, London, E.C.4.

Pre-Grouping Coaches. 4 mm. card parts. Embossed panelling. Thirds-Clerestory. Midland 46′ 7½″, 4s. 3d.; G.W.R. 46′ 6″. N.E.R. 45′ 3s. 9d.; six-wheel L.S.W.R., G.N. of Scotland, 2s. 6d.; N.E.R. 32′ brake van, 3s. 6d. Post 3d.—HANSON, 57, Sutherland Avenue, Fenham, Newcastle-on-Tyne, 4.

"OO"-10½″ Gauge. All types of models bought, sold and part exchanged. Lists/stamp.—MODELS (CITY) LTD., 2, The Arcade, E.C.2. Avenue 5759.

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Tel.: Freemantle 8941

Yeovil. Railway Modellers are invited to call. Agents for Trix, Peco, ERG, Rovex, etc.—"HINKS FOR RADIO," 36, Middle Street, Yeovil.

Nickel Silver Turnouts, 3′ radius, bullhead rail. Sleeper spacing 10 mm., 10s. 6d. post free. Two turnouts make crossover 50 mm. between tracks. Painted and ready for use.—A. RENFREW, West Linnburn, Shandon, Dumbartonshire.

We Are Specialists in the repair and rewinding of all electrical machinery up to 100 h.p. Separate dept. for service of model locomotive mechanisms of all types and ages. Replacement gears and wheels fitted by modern methods. Switches, rectifiers, transformers. Prompt service.—VERNON SMITH LTD., 364, 366, King Street, London, W.6. RIV. 3964.

"I" Gauge Bassett-Lowke electric 4-6-0 "Sir Sam Fay" and tender for sale. Prewar, unused, paint slightly scratched. Best offer—WOOD, 168, Ravenhurst Road, Birmingham, 17.

"OO" Two-rail Layout, 10 ft. × 6 ft. 5 in. built in four sections, nearly completed, 2 level two stations halt, 16 points with motors, locomotives, Exley coaches, numerous wagons, full scenic equipment. Cost over £75, nearest offer.—Box No. 6861, MODEL RAILWAY NEWS Offices.

XWD Midget Motors, etc. S.A.E. four-page list.—ROGERS, 2, Matlock Avenue, Southport.

Trix. Private owner has complete railway. 4-6-2's, 4-4-0's, 0-4-0's; coaches, wagons, stations, track, etc. Condition as new. Full list on application.—Box No. 6866. MODEL RAILWAY NEWS Offices.

Rovex Tender, two coaches, A.B.C. transformer/controller, 45s., all perfect. "Railroad Magazines" and "Trains" for sale. S.A.E. list.—BAILEY, 3, Bedford Street, Hereford.

Sale. "OO" stock and accessories, including Graham Farish items never used. Rail, components. Prefer sell complete, offers. S.A.E.—HISLOP, Hut 33, Kinloss, Morayshire, Scotland.

Model 81A Taylormeter Universal Test Meter. 74 ranges, a.c. and d.c., excellent condition, £12 or nearest offer.—MARSDEN, 14, Rosedale Avenue, Alvaston, Derby.

Leeds Model Co. New from stock, goods set with smoking locomotive and controller/transformer, £14 5s. List price £18 10s.—458, Dewsbury Road, Leeds 11.

Gauge "O" Handrail Knobs at 2s. per dozen. Also 2½″ and 3½″ gauge at 2s. 3d. per dozen, 5″ gauge at 2s. 9d. dozen. Postage extra.—A.M.R., 82, Arkwright Street, Nottingham.

C. J. HALL, The Model Engineer's Shop, 53, Ann St., Worthing, Sussex. Specialists in repairs, rebuilds and rewinds to any model locomotive, motor or dynamo. Conversions and modification effected at sensible prices. Prepare your motive power for next season now. All enquiries welcomed, advice free, genuine helpful service backed by fully equipped workshop. **Spray painting.**

Complete Model Railway. Steam "1" gauge. Open to offers, can be seen by appointment or full particulars supplied.—SPARKS, 19, Chesterfield Gardens, Crooms Hill, Greenwich, London.

Royal Scot Electric Locomotive, Gauge "O" Bassett-Lowke, 6/8 volts. Only used once. L.N.E. clockwork Mogul. Excellent condition. Enquire—MACLEAN, 21, West George Street, Glasgow.

Gauge "O" "George V," £2 10s.; L.M.S. 2P Class, £3; Bassett 4-6-0 Jubilee class, £12 10s.; "Royal Scot," £5; Windsor G.W.R. 2-6-2T, £5; All clockwork. L.N.E.R. Mogul electric, £5; "George V," £3 10s. Also gauge "1" "George V," £3 10s.—Box No. 6883 MODEL RAILWAY NEWS Offices.

"O" Gauge Locomotive body kits, 5P5F; "Prairie" Tank, 31s. 6d. Enquiries s.a.e.—DAWSON, Briars Yard, Lathom Ormskirk.

Hornby "Lord Nelson" electric loco, coaches, trucks, track, etc. B/L Super Enterprise steam loco. Blueprints. "Model Railway Magazines." Apply—L. HOWSE, 64, Churchill Crescent, Thame, Oxon.

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Model railway specialists: Finest in the Midlands. Agents for and stockists of many well-known firms. Why not ask for a copy of our A.M.R. Chronicle? The latest information regarding our stock, 1s., post free.
82, Arkwright St., Nottingham & 64, Narborough Road, Leicester

Trix Twin Railway, complete layout with large table top, cost £50; sale or exchange for engineer's lathe.—REX, 60, Shirehampton Road, Stoke Bishop, Bristol.

Hornby-Dublo Large Layout, brand new, bargain prices, sell items separately. Track, rolling stock, lineside features, including "Exley" coaches converted, etc. S.A.E. list.—73, Longford Avenue, Bedfont, Feltham, Middx.

Models Bought Sold and Exchanged. Send for free lists of many bargains in all gauges.—GRESHAM MODEL RAILWAYS, 146, Landor Road, Stockwell, S.W.9.

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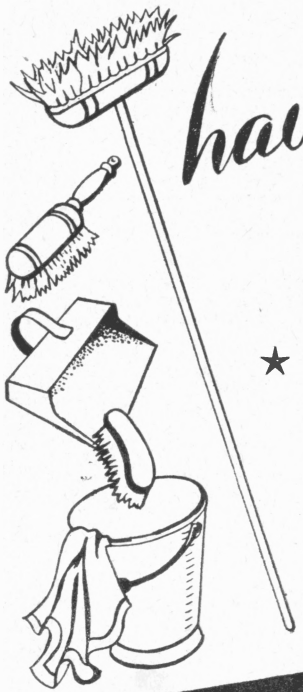

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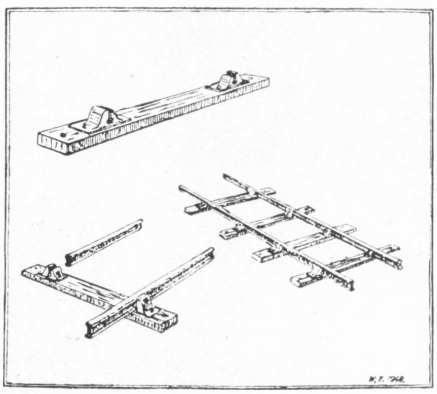

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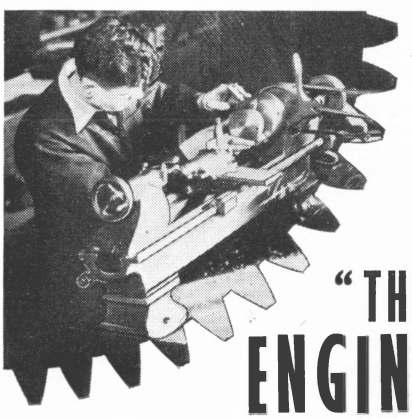

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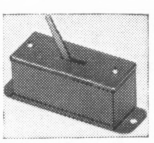

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